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THE UNIVERSITY OF ALBERTA

THE EXPERIENCE OF TIME

by

LAVERNE ANNIE MARTIN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

IN

COUNSELLING PSYCHOLOGY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

SPRING, 1986

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "The Experience of Time" submitted by Laverne Annie Martin in partial fulfilment of the requirements for the degree of Master of Education in Counselling Psychology.

Supervisor

Date: April 18, 1986.

ABSTRACT

The purpose of this study was to explore descriptively the experience of time. Subjects were invited to consider both "personal" time and "universal" time.

Eight subjects, five males and three females, ranging in age from 24 to 70 years, participated in the study. An adaptation of phenomenological methods was used in the collection and analysis of data. The research took place in two stages: a written questionnaire made up of projective and semi-projective instruments, and an interview loosely structured around questions posed by the researcher. Instruments used in the questionnaire were: (1) an adaptation of Dabrowski's Verbal Stimulus Test, (2) a story written in response to a TAT picture, (3) adaptations of two tests designed by Cottle--the Circles Test and the Lines Test and, (4) the request for a symbol or metaphor which represented time for the subject.

After all data were collected and reviewed by the researcher, they were condensed and structured under seven themes which emerged from the responses, from the researcher's experience of time, and from the literature on time. The themes identified were: (1) the expansiveness of time perspective, (2) temporal zone (past, present or future) the subject's attention tends to occupy, (3) feelings and attitudes towards lived/clock time, (4) attitudes to death, (5) religion or spirituality and time, (6) unusual experiences in relation to time and, (7) the meaning attached to time. Results organized according to the themes were presented subject-by-subject so that a unified picture of each individual's experience of time could emerge.

Next, results were examined afresh, theme-by-theme, so that the question, "What is the experience of all eight subjects in relation to each theme?" could be answered. Conclusions were drawn regarding commonalities and individual differences in the experience of time in relation to each theme.

It was clear that time is important to these eight subjects. The meanings attached to time were diverse, as were attitudes and feelings expressed about time. Clock time has a powerful influence over most of them. All reported that they often feel their "time" is different from that of others, and that the rate at which time passes changes dramatically under different circumstances, many of which they were able to identify. Death had been given considerable thought, and feelings and attitudes towards death varied greatly. There was a difference among subjects in the temporal zone(s) to which they were oriented. Self-described religiousness and spirituality were related to perceived expansiveness of time, attitudes towards time, and

orientation to temporal zones. Unusual experiences in regard to time were relatively common among subjects. Six reported deja vu experiences, five reported precognitive experiences and several described other "unusual" experiences pertaining to time. A "healthy" relationship with time was identified.

Implications of the study for therapy and education were discussed.

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CHAPTER I

INTRODUCTION

Introduction to the Study

The following study involves a descriptive exploration of the human experience of time. Particular attention was given to feelings and attitudes each subject holds towards time, to the meaning the subject attaches to time, to the temporal zone the subject's attention tends to occupy, to the expansiveness of time perspective, and to any unusual experiences the subject may have had in relation to time. Each subject was invited to consider "personal" time as well as a broader "universal" time.

The focus of this introductory chapter is on the nature and the purpose of the study, background to the study and the general procedure followed in the execution of the study.

Nature and Purpose of the Study

The central question investigated in this study is, "How is time experienced?". From the researcher's own experience of time and insights gained from the literature specific questions arose regarding time:

1. In which temporal zone (past, present or future) do subjects tend to orient themselves?
2. How does the experience of time feel to the subjects?
3. What meaning or meanings do subjects attach to time?
4. Do subjects limit their thoughts and feelings about time to their lifetimes or do they also consider time to exist for them beyond death?
5. Have subjects had experiences related to time that they classify as "unusual"?

This study is not an investigation of perception of time. Common sense views time as an objective reality existing independently from one's awareness of it. Scientists have expended much time and energy measuring chronological time with ever-increasing accuracy, so that today timepieces exist that are claimed to be accurate to within one billionth of a second. Experimental psychology, in its penchant for legitimacy as a science, has emphasized the human perception of the passage of time. Psychologists have researched diligently the accuracy with which the individual perceives the passage of small "measurable" units of time, under a variety of

conditions. Ironically, such diligence might be misplaced. As Davies (1980) points out, the belief that a clock even measures time may involve a confusion of a convenient construct with reality :

> There is no instrument that can record the flow of time, or measure its rate of passage. It is a common misconception that this is precisely the function of a clock. A clock, however, measures intervals of time, not the speed of time, the distinction being analogous to the difference between a ruler and a speedometer (p. 46).

Davies casts doubt on whether a clock measures the rate of time and by implication, on whether time is an entity that can be measured. And yet chronological time is important to us in western culture.

In this study the subject is the chief source of information about time. In the spirit of phenomenological research, the researcher returns to the phenomenon (time) itself. The assumption the researcher makes is that all humans determine their own experience. Temporal experience (experience of time), like all other experience, is personally and relativistically constructed. Because the researcher's experience is also highly subjective, presuppositions and assumptions that might influence the researcher's interpretation of the subjects' comments about time will be expressed through the thesis.

Background to the Study

> 'I think you might do something better with the time,' she said, 'than wasting it in asking riddles that have no answers.'
> 'If you knew Time as well as I do,' said the Hatter, 'you wouldn't talk about wasting it. It's him.'
> 'I don't know what you mean,' said Alice.
> 'Of course you don't!' the Hatter said, tossing his head contemptuously. 'I dare say you never even spoke to Time!'
> 'Perhaps not,' Alice cautiously replied, 'but I know I have to beat time when I learn music.'
> 'Ah! That accounts for it,' said the Hatter. 'He won't stand beating. Now, if you only kept on good terms with him, he'd do almost anything you liked with the clock. . .' (Carroll, 1971, pp. 97-98).

One cannot approach the subject of time without feeling a little like Alice! The purpose of this study is to begin to solve the "riddle that has no answer", the experience of time. Before examining what the eight subjects in the current study reveal about their attitudes towards time, their orientations in time and their thoughts about time, some of the researcher's reflections on these topics will be explored.

Time is familiar. Since it is all around us, we know it intimately. It is the stuff life is made of, a simple concept. Since everyone knows what time is, a definition might appear to be unnecessary. However, attempts at verbalizing our knowledge of time expose the elusiveness of this concept, and lead us into paradoxes and inconsistencies. The simple becomes obscure. Time is ever-present; it is also past and future. It is measurable on a clock in seconds, minutes and hours, and on a calendar in days, weeks and years. We know that every year has 365 days (except leap years, which are hard to explain), just as we know that each year goes by faster than the year before. Time is short or long, an instant or an eternity (even when it is an hour), stretching out infinitely in both directions. "Length" and "direction" also refer to space. Does this involve a confusion of terms? Time moves by; or do we move by as time stands still? No one ever seems to have enough time, but in fact, we each have all the time there is. There is virtue attached to being in "control" of time, to promptness and to efficient use of time. Time is spoken of as a commodity, and a precious one at that. We say we can earn it, spend it, waste it and save it. We even endow it with life-like qualities, or else how could we "kill" time?

It begins to become clear why we have difficulty conceptualizing time. We cannot see it, hear it, feel it, touch it, or taste it. We are in time. Because we are never outside time, we cannot stand back and see it clearly against a background of something other than itself.

Before becoming bogged in a mire of vagaries, one might logically turn to a dictionary for a definitive solution to the "problem" of defining the term "time". Webster's New World Dictionary (1976, p. 1489) gives several definitions, for example, "indefinite, unlimited duration in which things are considered as happening in the past, present or future. . .a period between two events or during which something exists, happens or acts. . .measured or measurable interval". The words "duration", "period" and "interval" are all defined in turn as a "time". The circularity is obvious, and time remains undefined. All that has been clarified is the elusiveness of "time". Daniel Webster Hering was right when he said, "Time and space are regarded as primary concepts of nature because they do not admit of definition on any simpler terms than their own names" (1962, p. 88).

Great, or at least persistent, minds have not allowed "time" to defeat them entirely, though. In Chapter II some of these minds will be appealed to for help in elaborating, if not defining, its meaning. In reviewing the literature on time, it becomes apparent that some of the difficulty in understanding "time" arises from the

variety of ways in which it is viewed by the different disciplines.

The scientist's symbol "t" is a deceptively simple representation of measurable time. Such measurements may be made by using the rotating Earth, or the movement of the planets, the swinging pendulum, the vibrating crystal, the oscillating ammonia molecule, the decay of a radium atom, or any number of complicated man-made instruments, such as atomic and molecular clocks, which can measure time intervals too small to imagine. Time can also be measured by the changes that take place in individual humans and in human society. The biologist refers to changes in the human or subhuman organism over time. The anthropologist describes differences in attitudes towards and orientation in time between cultures or over historic time. The empirical psychologist measures our response time and explores our sense of duration and simultaneity. The Existential psychologist deals with what we intimately know about our own existence in time, our feeling of continuous becoming. This overlaps somewhat with the theologian's concern with the questions of the "beginning" and the "end", and the ultimate values and purpose in between. The philosopher cuts across all of these disciplines and exposes the elusive quality of time. The educator takes on the challenge of conveying concepts of time and investigating how these concepts are acquired by the developing human being. The therapist helps individuals and families become free to live fully in the present, often by exploring past perceptions and decisions or by forming a new picture of the future.

It is likely that subjects will have been exposed to many of these, as well as other views of time. However, rather than choosing one of these stances from which to investigate time, the researcher returned to the phenomenon itself and attempted a fresh look at time, as unencumbered as is possible by her own prejudices. Subjects were invited to express their own experience of the phenomenon, whether or not such experiences are influenced by ideas and attitudes of others.

In common usage time is treated as a unitary concept; time is time. Because closer inspection suggests that time is complex, it might be useful to provide labels for the "kinds" of time being investigated. Time divides very generally into external or objective time and internal or personal time. External time is abstract. It is "out there" and belongs to everyone. It is the "idea of time". It is communicated to us by our society. It is grasped cognitively and is quantifiable. Children have difficulty understanding this time and it is inaccessible to subhuman species. Internal time is "lived time" or "felt time". It is intrinsic to each organism and, in fact, to the living universe. We experience it in a subjective manner; it varies greatly among individuals.

It is the time that "doesn't behave". An hour can seem like a minute, and a minute like an eternity, depending upon the internal state of the experiencer.

Of course these distinctions are not rigid; the concepts overlap and influence one another. Hering (in Time and its Mysteries,1962), as if to remind us of the futility of fragmenting the concept of time and of delineating the contributions of the various sciences, points out: "Any concept is perforce mental and is ipso facto psychological, and psychology as well as the physical sciences has [sic] not only advanced but, in a sense they have exchanged places with each other; whereas physical science was formerly mainly practical it has now become more theoretical and idealistic while psychology, once chiefly theoretical, has now become intensely practical. . .(p. 94)." In recognition of the complexity of time, but in an effort to fragment the concept minimally, it was decided to distinguish between personal and universal time only. Personal time is that time the individual expects to have during his or her lifetime, as well as any time he or she expects to experience beyond death. Universal time is all time-that which is available to everyone. It spans from the beginning of time to the end of time, if time truly does have a beginning and an end. Apart from this distinction in the mind of the researcher, the individual subjects were free to interpret the meaning of time in any manner they chose. One of the purposes of the study was to investigate that meaning. Death becomes an important concept for those who have considered their existence and its finiteness. Death is the ultimate reminder of the limited nature of the time experienced by humans.

Procedure Followed

The procedure followed in the execution of the study will be explained in detail in Chapter III. In general, phenomenological methods as described by Giorgi (1975) and Colaizzi (1978) were followed. Eight subjects were invited to participate in the study. None declined. All were interested in the topic under investigation, willing to give the three to six hours required for both parts of the study, university educated, and articulate enough to communicate their experience of the phenomenon. Data were collected by two means. Firstly, subjects responded to a questionnaire (see Appendix A) which included modifications of projective and semi-projective tests designed by Cottle (1974, 1976), Dabrowski (1977), Murray (1938) and the researcher. The responses to the questionnaire were reviewed by the researcher before the subjects participated in the second phase of the study, a tape-recorded interview

loosely structured by a series of questions (see Appendix B) designed by the researcher. The audio tape recordings of the interviews were transcribed verbatim by the researcher.

When collection of data was complete, the researcher reviewed thoroughly responses to all questionnaires and all interview transcripts. Central themes around which the information clustered emerged from the responses. The responses of each subject were then examined and the essence of what the subject said in regard to each theme was extracted from the data. After the results of the study were reported subject by subject, the researcher re-examined the data and reported how the eight subjects responded to each of the seven themes identified by the researcher. Conclusions regarding specific themes are drawn at the end of the reporting of results on each theme. General conclusions arising from the study follow the theme by theme reporting of results.

Limitations of this Study

This study utilizes phenomenological/qualitative methods. Therefore, it possesses the strengths and weaknesses inherent in this methodology. Data are descriptive rather than quantitative; therefore they are rich and multi-dimensional rather than precise and definitive. Inter-subject comparison requires considerably more effort on the part of the researcher and the reader than would comparisons in quantitative research, but the effort is rewarded by an inside experience of the phenomenon under study.

Generalizations from this study must be tentative. Because of the small sample size and the relatively high and homogenous educational levels of these eight subjects, specific results, particularly consistencies among subjects may not generalize to the population at large.

Organization of the Thesis

Chapter I has provided an introduction to and an overview of the thesis. Chapter II consists of a review of the literature pertinent to the present study. Chapter III gives a detailed description of the methodology employed in the study. Chapter IV reports on the results of the subject by subject analysis of the data. Chapter V, the concluding chapter, consists of a theme by theme analysis of the data. This analysis answers the question, "What is the human experience of time?" for these eight subjects.

CHAPTER II

LITERATURE REVIEW

Introduction

The current chapter contains selected thoughts from the vast literature on time. Specifically, in this chapter, writings pertaining to several of the themes identified in the study are reviewed as are some reflections on time issues in therapy. Those notions which stimulated the researcher's interest in the subject of time have been referred to in Chapter I. Information pertaining directly to research methodology and to the instuments used in the present study is given in Chapter III.

Literature on the Themes

Expanse of Time

This theme includes aspects of the quantification of time--the subject's lifetime, any personal time expected beyond this lifetime, and time beyond his or her personal time, that is, "universal time".

Time as measured by a calendar or a clock can be considered as independent, as something that goes on of its own accord. As proof of this apparent absoluteness there are those who still object to "daylight savings time" as a violation of "God's time". In 1752 the British government decided to adopt the Gregorian calendar which had been in use by the countries of Western Europe since 1582. By an act of parliament the day following the second of September was declared to be the fourteenth of September. There was rioting in the streets and shouts of, "Give us back our eleven days!" Some thought their lives had been shortened and workers believed that they would lose eleven days pay (Whitrow, 1980, p. 59).

The number of years a person expects to live is a measure of his or her projected personal lifetime. Tolor (1967) reports on psychological aspects of life expectancy. The writer points out that many subjects overestimate their expected lifetime compared to mean life expectancy. The reasons suggested for this variation include defensiveness against death anxiety, actual experience of death, learned attitudes to death and possibly general personality differences (pp. 21-4).

The expectation of existence beyond death is another major factor in the expansiveness of personal time. Many of our notions of what follows death come from religions. Doob (1971) suggests that, in fact, "the strongest appeal of most religions, the principal reinforcement for the sacrifices that are made, is the promise of

the future after death" (p. 344). Some of the ways of viewing what follows death are: heaven or hell as representations of eternity and reincarnation which makes time appear reversible or infinite since other earthly existences are promised.

Temporal Zones

Settle and Alreck (1978), after studying the effect of 5,000 people's time perceptions on their behavior, concluded that individuals are characteristically past or future oriented. An example of the future oriented person is one who when she plans a vacation, actually "experiences" it in imagination. When on vacation, she thinks about what she is going to do when she gets back home. The past oriented person "stores" experiences which she hopes to return to over and over. She chooses a vacation that will provide the best recollections (p. 40). Maslow (1976) emphasizes the importance of total involvement with the present. This necessitates "giving up" the "undigested" past which is carried about, but which is not yet the person himself. It also requires "forgetting" the future (p. 61). However, he also mentions the importance of transcending the present situation, in Kurt Goldstein's sense of relating "to existence also in terms of the possible as well as the actual" (Maslow, 1976, p. 263).

Two of the instruments used in the present study were designed by Thomas Cottle (1974, 1976), and provide information about the subject's view of the temporal zones. Cottle considers a linear conceptualization of time to be "objective", and a spatial conceptualization of time more "subjective". His Lines Test was designed to probe a subject's linear view of time. A spatial view of time allows for the return of the past to the present through remembering and a bringing of the future into the present through expecting. The Circles Test was developed to allow for a spatial or integrated view of the temporal zones. He points out that even when time is viewed spatially, the linearity of moments cannot be denied.

Attitudes to Lived/Clock Time

This theme includes aspects of time as it is felt--emotionally and in terms of its rate of passage. Cottle (1975) acknowledges that it is unlikely that people can be truly objective about their perceptions of time. One's experience of time is always affected by one's feelings, so responses to inquiries about time will always be subjective interpretations of objective facts. Cottle illustrates this distinction between objective reporting of temporal things and the subjective experiencing of them with a remark of

John Cohen (Cottle, 1975): "a month is about four times the duration of a week; a month ago is not felt to be four times as remote as a week ago" (p. 103).

Experience tells us that time goes more quickly at some times than others. "Our conscious awareness of time depends on the fact that our minds operate by successive acts of attention, in particular it is influenced by the tempo of our attention" (Whitrow, 1980, p. 72). Fraisse (1964) points out that certain drugs (opium, cannabis and mescaline) interfere with this tempo, creating the illusion that time has expanded greatly. Other drugs, such as the tranquilizers, cause an apparent acceleration of time, by slowing down the tempo of attention. In general, drugs (or symptoms such as fever) which accelerate the vital functions lead to the overestimation of time and those which slow them down have the reverse effect (p. 228-9).

Similar illusions can occur in dreams. A dream which could only have lasted a short time can be of apparently long duration. We ascribe to a dream a duration relative to the complexity of the events which took place in it. Fraisse (1964) explains that there is nothing extraordinary in this: "[Dream] images are like symbols; they suggest long trains of events or actions which are in themselves quite long, just as a few pictures in a comic strip are enough to suggest a whole adventure" (p. 230-1).

Our emotional response to a situation affects our perception of duration. Albert Einstein is often quoted as explaining, "When you sit with a nice girl for two hours, it seems like two minutes; when you sit on a hot stove for two minutes, it seems like two hours. That's relativity." Maslow (1968), when speaking of peak-experiences, mentions reports of the complete loss of extension in time, especially by lovers. He seems to be speaking of the extreme case of "relativity". "Not only does time pass in their ecstasies with a frightening rapidity so that a day may pass as if it were a minute but also a minute so intensely lived may feel like a day or a year" (p. 81).

It is commonly agreed that time seems to go by more quickly the older we get. Why is this so? One explanation for this phenomenon involves looking at time as "change". The estimation of duration is related to the number of changes experienced. William James explained the brevity of time in old age by that fact that one is so used to the events of life that they do not leave individual memories (Fraisse,1964, p. 246). Hugh Prather in Notes to Myself addresses himself poetically to this same topic: "Time is change, therefore when I do something unfamiliar, I literally consume more time per clock hour. Familiar means less time because less change. Therefore I can lengthen my life by staying out of doctrines and ruts" (1970, unpaged). For a child, much of

what he does is novel, so time seems longer.

One's experience of time is connected to physiological processes. Whitrow (1980) points out that some physiological processes are repetitive: for example, the beating of the heart, and others are progressive: for example, sclerosis of tissues and arteries. The repetitive processes can, however, undergo progressive change. This latter phenomenon has been studied in detail by Lecomte du Nouy, particularly with regard to the rate of healing of superficial wounds. He draws a sharp distinction between uniform (clock) time and physiological time. Since the time needed for a given unit of physiological work of repair is, on the average, four times greater at 50 years of age than at 10 years, he claims, "Everything therefore, occurs as if sidereal [clock] time flowed four times faster for a man of 50 than for a child of 10" (Whitrow, 1980, p. 66). So, the slowing down of our physiological processes gives rise to the illusion that, as we age, time tends to race by even more rapidly. "As we grow older, not only do our lives tend to become fuller, but also a unit of clock time becomes a smaller and smaller fraction of our total past life" (p. 67). "At 20, one year represents 1/20 of one's life but at 60, it is only 1/60. It is probable that this relationship does play a part in our evaluation of the periods of our life, for our judgements of a part always bear a relationship to the whole to which it belongs. . ." (Fraisse, 1964, p. 247).

Unusual Experiences

This theme covers any experience in relation to time that individual subjects consider to be unusual. They were asked specifically about deja vu and precognitive experiences. Many psychologists, for example Freud and Jung, emphasize the relative timelessness of the unconscious. It may be, then, that events which seem unusual to our conscious self originate in the unconscious. Jung's (von Franz in Fraser, 1966) "collective unconscious" has a future involvement extending beyond the life span of the individual, as well as a past reflecting the total of experience of our ancestors (p. 221). Jung also proposes "meaningful coincidences of external and internal events that are not themselves causally connected" which he calls synchronicity (p.223). The inner event may take the form of a dream, a fantasy or a thought. In another terminology, synchronicity might be labelled "precognition".

Precognition, although raising numerous theoretical difficulties, has not been ignored by psychology. Orme (1969) states, ". . .the experimental work reported appears to demonstrate a widespread (if intractable) ability to predict future events at an

incidence significantly better than that of chance guessing" (p. 17). He adds that the ability can't be related to any known sensory function or physical law. It is interesting to note that Priestly (in Orme, 1969) observed the majority of precognitive events to be either trivial in nature or, at the other extreme, dealing with disasters such as death. He explains that the events at these two extremes are usually outside individual control. Those in the middle, which are seldom precognized, are events for which we plan (p. 20).

John William Dunne's (1958) book An Experiment with Time deeply impressed its readers when it was released in 1927. First of all, he made a revolutionary statement about time. He said that time does not appear to be wholly finite and measurable, and it presents itself in ways which will not fit the concept of chronology. Then he revealed that he had been dreaming dreams that, if they had happened on the night following a particular event would be considered ordinary. However, they were occurring on the wrong nights--they were preceding the actual event. He was dreaming the actual narrative of happenings ahead of his own personal now. Choosing not to consider himself a freak, and certain he wasn't a medium, he ran an experiment based on the hypothesis that there was some peculiarity in the structure of time. He speculated "That dreams. . .all dreams were composed of images of past experience and images of future experience blended together in approximately equal proportions" (p. 59).

The experiment consisted of recording all dreams that were remembered on waking in the morning and comparing events of the day with dreams of the preceding few nights. Dunne said there was a danger of missing significant features of the dreams unless you pretended to yourself that the records you were about to read were those of dreams which you were going to have during the coming night. Then events in the past day could be searched for which might legitimately be regarded as the causes of the dream. After performing the experiment on himself he asked others to participate. Results were mixed. However, outcomes convinced Dunne that the number of people who were able to perceive the effect of precognition was "so large as to render any idea of abnormality absurd" (p. 90).

Forman (1978), a journalist, appealed to the British public for reports of personal experiences of time deviations. She received an unexpectedly large response from a wide range of ages and classes of people, reporting several kinds of "time slips". Some involved the superimposition of time past on the present, and others (38%) concerned the future being exposed in the present. About half of the

precognitions were concerned with waking premonitions or precognitive information; the rest were divided into precognitive dreams and recurrent dreams foretelling the future. The dreams "covered a variety of events from the tragic to the trivial" (p. 89). The time delay between the dream and the realization of the dream varied from a few minutes to several months. Although very little verification of these occurrences was possible, Forman believes that the experience of time dislocation is very common. She suggests it may occur in some form to the majority of us, though we may not recognize it for what it is (p.70).

Deja vu experiences seem to have been even less extensively researched than precognitive experiences. Meerloo (in Fraser, 1966) says that deja vu involves the feelings of both strangeness and familiarity. The person clearly feels that he or she went through the identical experience at some earlier time, but may not be certain what the experience was. "Deja vu often gives a feeling of living beyond time. It is in general explained by an actual experience triggering off an unconscious memory without the memory becoming conscious" (p. 245). Meerloo offers three possible explanations: (a) the memory may be a subliminal awareness of a forbidden infantile wish, (b) it may be the recall of ancient knowledge related to the actual experience, and (c) it may be related to a repressed dream. Deja vu is also a symptom associated with hysteria and epilepsy.

In 1971, Andrew Greeley was commissioned by the National Opinion Research Center (NORC) to undertake a study on basic belief systems. he decided to include a few questions on "mystical" experiences. Questions were administered to 1,467 respondents in a personal interview by one of NORC's trained interviewers. Subjects were asked about deja vu, extrasensory perception (ESP), clairvoyance, contact with the dead and mysticism. They were not, unfortunately, asked about precognition. Based on the results, Greeley was surprised to find that almost one-fifth of the American population has frequent paranormal experiences.

Deja vu was explained to the respondents as "an experience in which you find yourself where it appears you have been before, even though there is no way you could have been in such a situation before". Deja vu was the most frequently reported of the experiences. Only 38% reported its frequency as "never in my life", 29% reported "once or twice", 24% reported "several times", 6% reported "often", and 3% "cannot answer". A total of 59% indicated they had had deja vu experiences. Almost as many reported ESP experiences. Based on the results of a "psychological well-being scale" which was also administered, Greeley concluded: (a) paranormal is

normal, and (b) people who have paranormal experiences . . . are not kooks, sick, deviants, social misfits, schizophrenics or drug freaks. "In fact they may be more emotionally healthy than those who do not have such experiences" (p. 9).

Maslow (1968) speaks of disorientation in time and space as being characteristic of peak-experiences. He describes the person as being subjectively outside of time and space. "In the creative furor, the poet or artist becomes oblivious of his surroundings, and of the passage of time. It is impossible for him when he wakes up to judge how much time has passed" (p. 80).

Meaning of Time

Humans separate distinctly from the rest of the animal kingdom in their ability go beyond an internal "sense" of time to an objective "idea" of time. Even the higher subhuman species which are capable of making use of symbols cannot "know" time. The link between time symbolization and language symbolization is worthy of attention. Scofield (1978) claims that both phylogenetically and ontogenetically, a sense of time is more primordial than the use of language (p. 122). The developmental sequence he suggests is one of spatial awareness followed by temporal awareness, followed by language. Scofield also emphasizes the importance of symbols in conceptualizing time. "Our symbolic creations allow us to transcend time: to relive it, to exert control over it, and to understand our individual times in new ways" (p. 125). Orme (1969) mentions that some of the early symbols for time were: "a maze, a circle, a spiral, a series of rhythmic co-ordinates, an unifying movement" (p. 43). These predated the introduction of clocks, which present time as a mechanical succession of rigid units. Cottle and Klineberg (1974) mention that time is commonly represented as a line, a wheel or a pendulum. Gorman and Wessman (1977) point out that other common metaphors for time are shifting sands and falling tides (p. 234). Meerloo (in Gorman and Wessman, 1977) describes metaphors used by patients: "time eating away, time as an arrow, time as the two-faced god, Janus, time as a repetition ('time and time again'), time as money, time as boredom, and time as creation" (p. 236).

There are some more complex metaphors or symbols for time that are so well known that they likely have been influential in shaping our thoughts about time. St. Augustine (Davies, 1980) expressed time this way: Time is like a river made up of events which happen, and its current is strong; no sooner does anything appear than it is swept away (p. 46). This metaphor leaves a deep impression of a flow of time from the past to the future. The past is felt to be swept out of existence as the future is

brought into being. Newton, in a statement about time that is famous, said, "Absolute, true, and mathematical time, of itself, and from its own nature, flows equably without relation to anything external, and by another name is called duration . . ." (Fraser, 1966. p. 18). Newton's view of time as a continuous sequence of moments analogous to a geometric line provides a dependable framework within which to live our lives and bears a resemblance to our everyday experience. Einstein's theory of relativity undermines the idea of absolute time, and replaces it by the idea that different observers in relative motion will assign different times to the same event, and both will be right. What this theory injects into our symbolization of time is subjectivity. Length, duration, past, present and future are no longer dependable. They are flexible, elastic qualities which rely on their observer for their meaning. This view also coincides with aspects of our everyday experience.

Each human being is born into a culture which communicates to him or her its attitudes, its symbols, and its philosophy about time. This philosophy changes over space (geographically) just as it does over time (historically). Historically, our attitudes about time have changed dramatically over a relatively short period of time. It is interesting to note that until the Gregorian reform of the calendar Europeans seem to have been little interested in remembering just how old they were, if they had ever known in the first place. Modern biographers know more about their subject's ages than the subjects cared to know themselves.

Our present emphasis on punctuality is very recent. As Hering (Time and its Mysteries) tells us "One of the most noticeable effects of introducing railroad service into rural sections was 'bringing time to the people'. . .determining their movements by schedule" (p. 85). Before this new demand for promptness during the nineteenth century, clocks in a neighbourhood varied among themselves by perhaps an hour. Meetings were set, rather than by the clock, by "noon" or "early candlelight". So, time awareness started late, but grew rapidly. Adherence to clock time is a huge factor in living today, particularly in the western world.

As anthropologist Edward T. Hall (1961) has observed, time consciousness in other cultures today is not like ours. The title of his book, The Silent Language, suggests that time says different things in different cultures and it speaks more plainly than words. "The message it conveys comes through loud and clear. Because it is manipulated less consciously, it is subject to less distortion than the spoken language. It can show the truth where words lie" (p. 3). However, since time speaks different truths in different cultures, misunderstandings can arise when people of two cultures

interpret time signals from each other. For example, the North American obsession with promptness is not universal, although shared by Switzerland and northern Germany. An urban American businessman will ordinarily be aware of being two minutes early or late for a meeting with a peer. At five minutes late he will utter a full sentence of apology. By contrast, in Arab countries, being 30 minutes late is not considered significant (p. 5).

Here, if people are not prompt, it is often taken as an insult or an indication that they are not quite responsible. Fraisse (1964) considers punctuality an acceptance of the time of the group, a choice of security, of approval of those responsible for setting the time. Very precise individuals may suffer from feelings of insecurity. "Others use punctuality as a sort of weapon; they flaunt it as a model to their equals or inferiors and use it to put them in the wrong". Fraisse also considers lack of punctuality to be complex and highly significant. "An individual may arrive late on purpose through indifference to the requirements of society, through a somewhat aggressive desire for independence, to annoy those who await him or to create an opportunity of excusing himself, and thus be the center of attention" (p. 290).

Researching the meaning attached to time presents difficulties. The Time Metaphor Test (Knapp, 1960) attacks the problem directly. Subjects are asked to rate 25 phrases with respect to their appropriateness as descriptions of time. The phrases divide into three categories: dynamic-hasty metaphors (e.g., a galloping horseman, a dashing waterfall), naturalistic-passive metaphors (e.g., a quiet, motionless ocean, drifting clouds), and humanistic metaphors (e.g., and old man with a staff, a burning candle). Selection of dynamic metaphors is postulated to be connected with placing a high value on time. The degree of need for achievement (as measured by the Thematic Apperception Test) was found to correlate positively with dynamic-hasty descriptions of time and negatively with preference for naturalistic-passive and humanistic metaphors. Persons who scored high on a test of introversion were found to prefer naturalistic-passive images. So, there are indications that personality differences may exist in relation to the symbols preferred for the representation of time. (pp. 389-95)

The importance of adolescence as a milestone in the development of the meaning one attaches to time is expressed by Cohler (1982) in his article on the maintenance of a personal narrative of life course. He claims that the failure to maintain a coherent personal narrative leads to feelings of fragmentation and disintegration. He identifies three "transformations" in the course of life that are conducive to disruption and revision of the personal narrative: early to middle

childhood (five to seven years), childhood to adolescence and young adulthood, and adulthood to midlife (p. 205). With the advent of adolescence the ability to comprehend the future in terms of the past develops. "Reminiscence becomes an important element in the maintenance of the personal narrative" (p. 112). As well, having developed the capacity for reflection, the adolescent perceives a greater continuity in time; the past, present and future become connected.

Cohler says, "If the major task of the Oedipal period of development was forgetting the past, that of adolescence is remembering the future. Perhaps for the first time in the life course, the present is seen as situated between past and future" (p. 218). He sees this achievement as made possible by development of formal operations in the sphere of logic.

Time and Therapy

Several references in the literature relate to therapy, at least indirectly, by speaking of what promises to be a "healthy" relationship with time, or stance in time. In fact, Dossey (1982), out of his observation that certain of his patients could eradicate some illnesses through acquiring a new experiential meaning of what time was about, concluded that "many illnesses. . . may be caused either wholly or in part by our misperception of time" (p. 21). He became convinced that the perception of time in a linear, one-way flow can be destructive. On the other hand, "a nonlinear view of time wherein past, present, and future merge into a timeless stillness" creates bodily health. He advocates using the current relaxation techniques--biofeedback, autogenic therapy, transcendental meditation, progressive relaxation, and refers to them as time therapies (p. 168).

Maslow (1976), it will be recalled, advocates transcending one's own past. By this he means embracing and accepting one's past into one's present self, forgiving oneself, and letting go of remorse, regret, guilt, shame, and embarrassment. Transcending one's past contrasts with viewing one's past as something before which one was helpless (p. 261). He suggests there is a danger, when solving a problem in the present, of sifting through past experiences and selecting a solution that worked in the past. It will work again to the extent that the present is like the past. But the present is often very different from the past and problems result from applying inappropriate solutions. Maslow also recommends giving up the future, because planning for the future takes away from full participation in the all-important present moment. The Personal Orientation Inventory (Shostrom, 1966) is a measurement of

self-actualization, Maslow's indicator of mental health. One of the two ratios on this test is the Time Ratio, a measure of time competence. It tests the ability to live fully in the here and now, tie the past and future to the present in a meaningful continuity, not be burdened by guilts, regrets, resentments from the past, tie aspirations to present working goals, to have faith in the future without rigid, over-idealistic goals.

The concept of time is central to Existential philosophy and therapy. May (1983) observes that, "The most profound psychological experiences are peculiarly those which shake the individual's relation to time. Severe anxiety and depression blot out time, annihilate the future. " (p. 138). In fact, Minkowski (1970) goes so far as to suggest it might be the disturbance of the patient in relation to time that results in the anxiety and depression (p. 172). In contrast with Maslow, Existentialists place their emphasis on the importance of the future as the dominant mode of time for human beings. In therapy the focus is shifted to some point in the future outside the depression or anxiety in the hope that the patient arrives at a new perspective which provides hope (p. 135). Anxiety is not seen by the Existentialists as something to be avoided. In fact, in any human dilemma, Maddi (1976) sees two options. One "pushes the person into the future, the unknown, the unpredictable". The other "pulls the person into the past, the status quo, the familiar". Choosing the future brings existential anxiety, whereas choosing the past brings ontological guilt. Ideally, one chooses the future in spite of the anxiety. The alternative is a kind of living death. The past is not considered meaningless by Maddi, but is transcended and recreated in the service of the present. (p. 133)

Doob (1971), after a rigorous and broad analysis of time, poses a series of questions to summarize the issues covered and to captualize his own views. Two pertain to this study. Firstly he asks, "Should we orient ourselves toward the past, present or future?" He proceeds to point out the advantages to orienting to each of the temporal zones, and concludes that "as the occasion demands, orientation should be shifted from one direction to another; the full life usually demands all three orientations". Secondly he asks, "Should continuity be retained or sought between the pase, present, and future?" Again he covers all bases by answering "Yes" and "No". "Without continuity there is dissociation." On the other hand, "painful recollections disturb the present and future; it is more efficient and satisfying to push ahead" (p. 409-410).

As if to emphasize the importance of pushing ahead, Rabin (1978) reports on one study which found that, "Persons in psychotherapy tend to alter their primary past

orientation to a future orientation as the treatment progresses successfully" (p. 295). During early therapy sessions there were numerous references to the past, as compared to present and future. As therapy advanced, the issues of the past became less salient and future direction, as indicated by planning, is of utmost concern.

Conclusion

This chapter has covered literature relating to the themes which formed the structure for reporting, in the subsequent chapters, the data collected in the present study. The following chapter describes the methodology used to collect and analyse the data.

CHAPTER III

METHODOLOGY

Introduction

The focus of Chapter III is upon the method followed by the researcher in exploring the experience of time of the eight subjects who participated in the study. Particular attention is paid to the selection of subjects, the nature of the research approach, the research procedure, the instruments used, and the treatment of the data.

Subjects

Eight subjects, five males and three females, ranging in age from 24 to 70 years participated in the study. An attempt was made to include representatives from a wide range of ages and a variety of professions. Another criterion for selection was that the subject be interested in the study and articulate enough to communicate his or her experience of the phenomenon under study. Those approached by the researcher were informed of the purpose of the research and the probable time commitment involved.

Research Approach

Rather than a traditional experimental method, an adaptation of phenomenological methods was used for the present study. The writer is the sole researcher and analyzer of the data pertaining to time. In order that the researcher's biases be more understandable and their influences more visible, the research process will be explained.

The study explores the question: "How is time experienced?". Data used to answer the question were collected according to some of the principles of phenomenology. Giorgi (1975) states:

> Phenomenology is the study of the structure, and the variations of structure of the consciousness to which any thing, event, or person appears. It is interested in elucidating both that which appears and the manner in which it appears, as well as in the overall structure that relates the "that which" with its mode or manner (p. 83).

This approach, which attempts to clarify the manner in which the object of experience

appears to consciousness, seems particularly appropriate to the study of the phenomenon of time.

Time "appears" and takes on a meaning for each person at the same time as it prompts an emotional response, or an attitude, in the perceiver. Fitting the method to the phenomenon is characteristic of phenomenological research. Colaizzi (1978) points out that traditional psychology has tended to force psychological contents to conform to the dictates of one method, the experimental method. Phenomenology makes use of many descriptive methods. "Each particular psychological phenomenon, in conjunction with the particular aims and objectives of a particular researcher, evokes a particular study, a descriptive method" (p. 53). In this study, a combination of written descriptions in response to a questionnaire and an interview loosely structured by a list of questions was the method of choice. Both are available in Appendix A and Appendix B respectively, and will be described later in this chapter.

One of the important presuppositions of this research method is that the phenomenon is not understood in any definitive way by the researcher. This contrasts with research using a natural science paradigm which begins with operational definitions and works with measurable entities. Because affective responses are not considered measurable, they are usually neglected. The phenomenologist, in Husserl's words, "returns to the things themselves", rather than to definitions of things. By contacting the phenomenon as people experience it, and investigating it in a meaningful way, the phenomenon can be descriptively identified and seen in a new light.

Phenomenology assumes that all humans (the researcher included) determine their own experience. The meaning the researcher attaches to his or her unique experience is in danger of being imposed on the subject and thus interfering with objective research. The means of preventing this interference is to bring out into the open the researcher's assumptions about the phenomenon under study. Giorgi states; "Phenomenology holds that only after a strict and careful description that brackets all prejudices can more specific investigations, whether philosophic or scientific, begin" (1975, p. 84). This researcher's personal reflections on time are reviewed in Chapter I and the researcher's assumptions and expectations regarding each theme are given along with the specific themes in Chapter V.

Many other aspects of phenomenological research were incorporated into this study. The reader is referred to Colaizzi (Valle & King, 1978), Giorgi (1970) and

Giorgi (1975) for a more thorough description of phenomenological research methods. One further quality, that of researcher as participant in the research, is worthy of mention. In fact, the researcher and subject are described as co-researchers. A high level of mutual respect and trust is necessary in this relationship. Giorgi (1970) emphasizes that within the context of the human sciences, it is essential for the researcher to be present in a human way, and not in a neutral way, to each subject (p. 131). Colaizzi (1978) suggests this can be accomplished by listening with more than just the ears, with the totality of one's being and with the entirety of one's personality (p. 64). The researcher implemented this suggestion by reflecting the meaning she heard emerging from subjects' responses during interviews and by exploring with the subject whatever he or she considered relevant to the phenomenon time within the structure provided. The effectiveness of this method of "being present" was verified by giving the written data pertaining to their responses to the six subjects who were available at the time of completion. Their comments were requested regarding the accuracy of "meaning" reported. All felt their experience had been represented accurately.

In summary, the research approach employed in this study may be described as phenomenological. Subjects were regarded as unique individuals and were interviewed with the intention of descriptively identifying the experience of time. Questions were designed to add structure to the written descriptions and to prompt the discussion of the experience of time during the interviews. Because the questions control somewhat the meaning which is allowed to emerge, they reflect the prejudices of the researcher. This leads to the necessity of an explicit statement of the researcher's presuppositions about time in order to objectify the research (see Chapter V). The next section describes the procedure which was followed in the collection of data. After a description of the instruments employed, the method of analyzing the data will be outlined.

Research Procedure

The collection of data from subjects was accomplished through a written questionnaire and a semi-structured, in-depth interview. Subjects who agreed to participate in the study were asked to complete a questionnaire which occupied from one hour to three hours. Upon completion, which occurred from one day to two weeks after delivery, the researcher retrieved the questionnaire and an appointment was made for the interview with the subject.

Questionnaires were read in full by the researcher before the interview so that any omissions could be rectified at the later meeting. Interviews lasted from one to two hours and all took place within four days of completion of the questionnaires. Interviews were audio-recorded with the permission of all subjects and took place in the researcher's office, the subject's home or the subject's office. A complete verbatim transcription of each interview was made by the researcher. Following the collection of data from all subjects, the responses were analyzed and interpreted following the procedure outlined in the section of this chapter entitled "Method of Treatment of Data".

Instruments

Several instruments were chosen, adapted or designed to prompt a description of the experience of time and to collect information for this study. Five of them were included in the Questionnaire About Time (see Appendix A). The sixth is the series of twenty questions explored with each subject during the interview (see Appendix B). The questionnaire was designed to be completed, in writing, by the subject at his or her own speed. A section asking for Personal Data is followed by five questions or semi-projective tests. The interview questions were posed verbally. A description of each instrument follows.

Verbal Stimulus Test

Dabrowski's (1977) Verbal Stimulus Test consists of a list of twelve emotion-laden stimulus words such as great joy, death, solitude, and loneliness preceded by instructions to write freely emotional associations and experiences related to the words. These verbal stimuli direct the subject to areas of experience, or concepts which are of high diagnostic value because they allow a fairly clear differentiation of emotional attitudes. For the purpose of eliciting emotional responses and associations with time, Dabrowski's method was used. Two of his stimulus words, death and immortality, were retained. Four words were added to the list. These words were time, past, present and future. Responses to these words were not used to establish levels of development, as they are traditionally. Instead they yield information relating to the experience of time.

TAT Story

Question two instructs the subject to make up a story to go along with picture

number one from the First Series of the Thematic Apperception Test (TAT, 1971). This picture is of a young boy contemplating a violin which rests on a table in front of him. It was selected because it was designated in the TAT manual as suitable for both sexes and for all ages. This instrument is not used, as was intended by the author of the test, as a method of revealing components of the personality of the subject. Instead, the story was examined for the verb tenses (past, present, future) used in the subject's composition. The tense(s) used were assumed to be indicative of the temporal zones occupied by the subject's imagination at the time of writing of the story. Later, during the interview, the subject was asked to estimate the span of time covered by the story he or she had written. This "action time span" (Klineberg, 1967, p. 187), reflecting the subject's spontaneous tendency to extend his thoughts beyond the present, may be suggestive of the expanse of time the subject customarily allows his imagination to span.

Circles Test

Question three, which instructs subjects to "think of the past, present and future in the shape of circles and draw them on this page" was designed by Thomas Cottle (Cottle, 1976) and is called the Circle Test. The objectives of this test are to encourage respondents to think of time spatially (as opposed to linearly), to provide a way of indicating their perception of the relatedness of the temporal zones (called temporal relatedness) and allow the respondents to indicate the relative importance of the past, present and future (called temporal dominance). The assumptions are that circles will be drawn overlapping if the subject perceives the temporal zones as interrelated, and that the relative sizes of the three circles will be indicative of the importance of the temporal zones to the subject.

Cottle (1976) has devised a scoring system for temporal relatedness which depends upon the degree to which the circles touch or overlap. The configuration of circles which do not touch is designated temporal atomicity and scored zero. At the other extreme is what is called temporal integration. Time zones (represented by the circles) overlap partially or totally and are scored anywhere from 8 to 18. Between these two is the configuration called temporal continuity, in which the circles touch but do not overlap. This continuous configuration comes closest to representing the linear conceptualization of time flow.

A similar scoring system is described for temporal dominance which is ascertained by comparing the size of the circles in relation to each other. A circle

receives two points if it is noticeably larger than another circle, four points if larger than the two other circles. Cottle suggests that his straightforward scoring procedures do not do justice to the richness and imagination of his respondents' perceptions. Variations are not taken into account and Cottle considers this to be a loss.

This researcher's decision was to describe and interpret that which is given on this test, rather than adhering to a numerical scoring system. If representations varied from the expected three circle configuration, during the interview subjects were asked to explain their representations of past, present and future as circles. At that time each subject was asked as well to draw a stick figure representing himself or herself on the drawing of the circles. This is considered to be indicative of where the subject perceives himself or herself to be located in the temporal zones.

Symbol or Metaphor

Question four asks the subject to represent time as a symbol or a metaphor. A space is left for a response, either written or drawn (or both). This question was intended to encourage an abstract verbal or non-verbal representation of the central concept in this study. It was expected that the meaning the subject attaches to time and/or the subject's attitude towards time might be revealed by this less than direct probe. Since cliches about time abound, it was expected that they might be used in response to this question. Although not "original", they do represent meaning, and communicate attitudes about time.

Lines Test

Question five, the Lines Test, was also designed by Thomas Cottle (1976). The instructions encourage respondents to think of time in linear or chronological terms. The test consists of a 15 centimetre horizontal line preceded by instructions to think of the line as being time, and to mark on it your own birth and death and the boundaries of the present. The five intervals produced by the marks on the line are suggestive of the perceived duration (or importance) of five specific units of time: (a) the personal past (the time from one's birth to the present), (b) the personal future (the time from the present until one's death), (c) the historical past (the time prior to one's birth), (d) the historical future (the time following one's death), and (e) the present. As well, the respondent's lifetime (the personal past, the present, and the personal future) can be compared to his or her representation of historical time (the whole 15 centimetre line).

The Circles Test and the Lines Test both yield information about subjects' perceptions of the temporal zones. However, there is likely to be a difference in the quality of the responses. Cottle speculates that the Circles Test is likely to reflect a more subjective attitude and the Lines Test to reflect a more objective attitude towards the temporal zones. It is expected that the representations of the past and future on the Lines Test would be more closely a reflection of chronological time for the subject than those on the Circle Test. It was expected that subjects would indicate the present in terms of how long it seems to be.

It was more difficult to predict the manner in which people would represent their lifetime in relation to all time. Some might interpret the time line as representing only their lifetime, while others might choose to represent their lifetime as a mere dot on the time line. Representing one's lifetime as significantly larger than historical time was called by Cottle (1976, p. 108) an egocentric perception; the reverse was called the historiocentric perception.

During the interview, any spontaneous additions to the Lines Test were queried and subjects were asked their reaction to representing time as a line. Also, each subject was asked to estimate the age which he or she might be at death.

In preparation for the interview which followed the completion of the questionnaire, subjects were asked to think about any alterations in perception of time they had experienced. The questionnaire utilized in the present study has been explained in this section. Two of the instruments were designed by Thomas Cottle (1976), one by Murray (1943) and one by Dabrowski (1977). The method of interpretation of the results varies from that suggested by the authors of the tests. Cottle intended his tests to yield numerical scores. Murray's test was often used as a projective personality test. Dabrowski intended to measure levels of emotional development. This researcher's intention was to explore the subject's experience of the phenomenon, rather than to measure values attached to responses. The two other instruments were designed by the researcher. The final instrument used in the study, the list of interview questions, is described next.

The Interview

The purpose of the interview was to encourage each subject to speak in a personal way about his or her experience of time, the meaning attached to time, and the affective response to time and to the temporal zones. Attitudes toward and beliefs about death were explored, as were unusual experiences associated with time.

Twenty questions were used to add structure to each interview. The questions are included as Appendix B. The order of the questions was not followed invariably. Instead, questions were asked verbally as they seemed appropriate in the conversation. Occasionally questions were not asked since the subject spoke spontaneously on the topic of the question. As much as possible, the subject was encouraged to elaborate on and interpret each question as seemed appropriate to him or her.

Several questions have been referred to in the previous section as they are extensions of the questionnaire. Many other questions are self-explanatory. Only a few require elaboration.

Question five asks the subject to consider an important decision he or she has made, but not to explain the decision itself. Instructions that follow ask the subject to indicate the relative importance of: (a) one's past learnings and experiences, (b) one's present circumstances, and (c) the implications for the future in arriving at a choice. This question was designed to suggest the temporal zone(s) which occupy the thoughts of the subject and thus exert an influence over the subject. A more direct question such as, "When you are thinking, is it usually about the past, the present or the future?" might have been more difficult to answer than a question regarding an example from the subject's experience.

Question seven, offering eight choices among phrases descriptive of the subject's attitude toward death was asked only if the subject's response to the stimulus word death was not personalized, that is, if he or she neglected to refer to his or her own death in any way. The researcher regarded attitudes towards death important because it was considered that the subject's notion of personal time would not be developed without an awareness of death.

Question nine asks about the subject's belief regarding what follows death. This is an indirect way of asking whether the subject feels that time exists for him or her beyond biological death or even before birth. The answer to this question can have an impact on how one sees one's lifetime in relation to historical or universal time.

Question ten asks whether the subject considers him or her self to be a religious or spiritual person. Religious beliefs can have a powerful influence over attitudes towards human existence. Time may be considered a quantification of that existence. Some subjects may differentiate between religious and spiritual; some may not. Spiritual disciplines such as meditation or prayer might affect the experience of time.

Question eleven, which asks whether the subject meditates, prays or

otherwise communicates with God, follows naturally from the preceding question. If subjects indicated they were not religious or spiritual, only meditation was asked about. This question was included because meditation and prayer (or contemplation) have been associated in the literature with the transcendence of time. In fact, Bentow (1979) describes the ultimate in slowing of time during a deep meditative state. He has experienced the second hand on a clock appearing to stop its movement (p. 75).

Question seventeen asks the subject for his or her ethnic origin. It was included in order to ascertain whether a subject's self-described ethnicity is related in any way to the experience of having a "different time" from those around him or her. Edward Hall (1973) has described attitudes toward time in other cultures, which differ dramatically from the Western preoccupation with promptness and "efficiency".

Question eighteen which asks for the subject's earliest memory, was included as an inquiry about the birth of awareness of the individual. One's "conscious" lifetime can be considered to have begun with the first event that can be retrieved from memory. Subjects were also asked about qualities of the memory. For example, was the memory visual; were there sounds or smells associated with it; what emotional associations were there?

Question nineteen inquires about the beginning and end of time. The answer will indicate whether the subject considers time to be available in an absolute quantity or as subject to change. Responses to this question often lead naturally into question twenty which asks for a definition of time. This encourages the subject to elaborate the meaning attached to time. To conclude the interview the subject was asked if anything else had come to mind regarding time, and if he or she had any questions to ask the researcher.

The interview questions and other spontaneous questions asking for elaboration of statements which reflected the subject's meaning composed the researcher's part of the interview. Subjects were invited to contribute whatever other information seemed relevant to their experience of time.

This description of the interview questions concludes the review of the instruments used in this study. The questionnaire and the interview questions were used to prompt description of the subjects' experiences of time and of the temporal zones. The method of collecting the data was therefore a modification of phenomenological methods. The following section describes the treatment of the data after they were collected using the instruments described in this section.

Treatment of Data

The first step in the treatment of the collected data was to make a complete verbatim transcription of each audio-taped interview. Any recorded data which applied to the previously completed questionnaire were added to the subject's written responses by the researcher. The method used by the researcher to analyse the responses to the questionnaire and to the interview questions was modelled roughly after the methods of data condensation described by Giorgi (1975) and Colaizzi (1978). Written responses to all questionnaires were reviewed, as were transcriptions of the interviews. Central themes around which the information clustered emerged from the responses, from the topic areas covered in the literature on time, and from the "common sense" approach to time. The responses of each subject were then examined; the meaning of what the subject said in regard to each theme was extracted from the questionnaire responses and the transcript of the interview. Care was taken to reflect as closely as possible the world view of each interviewed subject. The language of the subject was retained as often as possible, in order to remain true to his or her perception and construction of the phenomenon of time.

When subject by subject analysis of the data was complete, the data were examined once more. This time the researcher asked the question, "How is time experienced?". A summary of the answers the present subjects gave to this question are reported in the concluding chapter of the thesis. It is organized theme by theme.

Conclusions

The results of the analysis of the data collected in the manner described in this chapter will be reported in the following chapter, subject by subject. In the concluding chapter the results of a theme by theme analysis of data will be reported, in order to examine how time is experienced.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to examine how subjects experience time. The study involved two phases of data collection. During the first phase subjects completed a questionnaire (Appendix A). The second phase consisted of a semi-structured interview between the researcher and each subject. Data were examined to discover what each subject was saying in reference to each of seven themes identified by the researcher.

The results will be presented in the following manner. Firstly, in this chapter the content of each of the themes will be described. Then the data will be presented subject by subject, that is, personal data, the responses to each theme on the experience of time and an evaluation and summary will be presented for each of the eight subjects. Then, in the following chapter the results will be summarized theme by theme.

Themes

In order to add structure to the reporting on the data pertaining to the experience of time, seven themes were identified by the researcher. Some themes were suggested by the literature on the subject of time, others by the responses of subjects to the questionnaire and the interview. Each theme will be described briefly so that the reader will understand the questions suggested to the researcher by the chosen themes.

Expanse of Time

This theme incorporates aspects of time which refer to its quantification. How long is time for the subject? How broadly or narrowly does the subject view time? Is time seen as encompassing the present? His or her own lifetime? Generations? Thousands of years? Infinity? Is time seen as running out? As having a beginning and an end, as being finite? How much time does the subject perceive is left? Several of the questions in the research instrument are likely to yield information which will be relevant to this theme. The Lines Test is one such question. The subject is asked to place marks indicating birth and death, as well as the boundaries of the present, on a

line that represents time. The question "At what age do you think you will die?" quantifies in years the expanse of personal time the subject expects. The question about the subject's earliest memory yields information about the dawning of awareness of existence in personal time. When responding to the interview question regarding the beginning and ending of time, subjects may give their views of universal time. Responses to the stimulus word immortality and to the interview question "What follows death?" may reveal beliefs regarding personal time beyond death. The definition of time could also yield information about the expanse of time experienced by the subject, as could less structured conversation contained in the interview.

Temporal Zones

This theme focuses on the three temporal zones-past, present and future. In which temporal zone is the subject oriented? How does the subject respond affectively towards the past, the present, the future? Does the subject feel attracted more to one zone? Is one more important (of higher value)? Is one more ominous than the others? Is one more useful to the subject? In which temporal zone does the subject's consciousness tend to lie? Is there a perceived connection among the time zones? Two of the questions on the questionnaire relate directly to this theme. The stimulus words past, present and future ask for emotional associations and experiences with these words. The Circles Test asks the subject to represent the three temporal zones as circles. The relative sizes of the circles is assumed by Cottle (1974, p. 110) to be equated with the perceived importance of the time zone represented. The same author considers the proximity or overlap of the circles to represent "time zone relatedness", or the perceived connection among time periods. The tense used in the TAT story is suggestive of the temporal zone occupied consciously by the subject at the time of writing. The Lines Test, asking for an indication of the boundaries of the present, and of birth and death of the subject on a line, will yield information about the perceived "length" of the personal past, present and future. Interview questions which relate directly to this theme include the one asking the subject to "represent yourself somewhere on the circles you have drawn". Another asks, "What emotional response do you have when you think of past, present and future?". A third asks the subject to complete the sentence "The past (present, future) is good for. . .". A further question, designed to reveal the relative importance of the three time zones, asks the subject to consider an important decision already made. Then three choices are offered, each reflecting the influence of either the past, present or future on the making of the

decision.

Attitudes to Lived/Clock Time

This theme includes aspects of felt time. How does the experiencing of time feel? How does the subject react to time as measured off by a clock? Does time seem to pass quickly or slowly at times, or does it pass at a regular rate? Is time anthropomorphized, for example, seen as a friend or a tyrant? Does the subject feel his or her "time" is different in any way from that of other people? Although many of the questions on the questionnaire and those asked during the interview (e.g., stimulus word time, symbol or metaphor for time, definition of time) are likely to provide input on this theme, two questions apply directly: (a) Question 12 asks, "Does time go by at a regular pace for you? If not, under what circumstances does time seem to move more quickly or slowly for you?". (b) Question 16 asks, "Have you ever felt that your time was different from that of others around you, such as your family, co-workers, society in general? How do you explain this?".

Attitudes to Death

This theme encompasses death as an aspect of time. Is death considered to be an ending of personal time? Has death been considered by the subject? If so, at what age is it expected, and how does the subject feel about death? What is death expected to be like? What experiences are associated with death? Does the subject have a belief in life after death or in multiple existences? Three of the stimulus words may yield data pertaining to this theme-death, immortality and possibly suicide. Question 8 asks, "At what age do you think you will die?". Question 9 enquires, "What do you believe follows death?". Question 7 was asked only if the subject had not previously spoken in a personal way about death. It asked, "Which of the following statements best describes your attitude about death:?

a) I am afraid of death.

b) It troubles me, but I wouldn't say I fear it.

c) I haven't given it much thought.

d) I've decided not to think or worry about death.

e) I'm working toward accepting it.

f) I've thought about it a great deal, and have come to accept it.

g) I'm looking forward to it.

h) Other:_____."

Religion or Spirituality and Time

This theme incorporated any influences of religious beliefs or of spiritual disciplines on time experience. Does the subject identify with a formal religion? Do religion or spirituality reflect upon the subject's view of time or do disciplines associated with religion or spirituality (prayer, contemplation or meditation) alter perception of the passage of time? The "Personal Data" section of the questionnaire asks the subject to volunteer his or her "religion". The stimulus word immortality might reveal religious beliefs. Two interview questions relate directly to this theme. Question 10 asks, "Do you consider yourself a religious or spiritual person?". Question 11 asks, "Do you meditate, pray or otherwise communicate with God?".

Unusual Experiences

This theme includes aspects of time experience which are out of the ordinary. Does the subject report any experiences associated with time that depart from their normal way of experiencing time, for example: precognitive experiences, deja vu experiences, experiences of stepping outside time, of time standing still or of time speeding up? Responses to the stimulus word time might yield information about unusual experiences in time. Three interview questions pertain directly to this theme. (a) Question 13 asks, "Have you ever had an experience of "knowing" ahead of time about some event which later takes place, that is, a precognitive experience?". (b) Question 14 asks, "Have you ever found yourself in a situation which, although new, felt like you had experienced it before, that is, a deja vu experience?". (c) Question 15 asks, "Have you experienced any other alterations in, or unusual perceptions of, time?"

Meaning of Time

This theme covers cognitive aspects of time. How does the subject define time? What meaning does the subject attach to time? What experiences are associated with time? How does the subject symbolize time? The whole interview could potentially give data applicable to this theme. More specifically, the stimulus word time and the fourth question on the questionnaire, "What symbol or metaphor is representative of time for you?" may yield information about the meaning the subject attaches to time. Interview question 20, "What would be your definition of time?" asks the subject to answer the question directly.

The following section reports the responses of the eight subjects to the questions pertaining to each of the seven themes described in the preceding section.

Results (Subject by Subject)

Subject A

Personal Data

This subject is a male, 36 years old, twice divorced, with three children. He works as a school administrator, and has completed more than six years of university. He was born in urban Alberta. He describes his religion as Roman Catholic, "with a Bahai instigation currently underway".

Themes

Expanse of Time

Subject A's story written in response to the TAT picture describes the present feelings of the boy looking down at the violin and expresses regret about not being able to play. "If I could only play this damn thing-I had the opportunities to learn but they've passed me by. The hours spent elsewhere left none left." He states that the action of the story spans ten minutes.

He has indicated his lifetime (the time between his birth and death) to be a small fraction of the whole time line (only 0.3 cm of the 15 cm line). During the interview he suggested that "We occupy such a little part of the whole range of time". Later, when asked if time has a beginning and/or an end, Subject A says, "No. I don't think there's a start and a stop. We deal in too many absolutes-start and stop, love and hate, man and woman. . .I think time is one of those things that maybe transgresses [sic] that. The straight line (time line on the Lines Test) implies a beginning and an end. It could almost be circular, I guess. It's like talking about the universe. I don't believe it has a beginning and an end. The end goes on forever. When we get to the end we are at the beginning again."

Subject A's earliest memory focuses on an incident which happened when he was six years old. It involved "getting booted out of kindergarten". He recalls standing in the hallway, and the humiliation he felt before reaching the decision to leave and walk home, never to return. He remembers what his surroundings looked like, and walking past his church, making the sign of the cross as he went past.

"Anything before that, anything after that, until grade eight or nine is blank. Next, it would be throwing rocks at some guy because he was chasing a girl that I liked or something--six or seven years up there." At age 36, then, this subject has recall of 24 or 25 years of his life (apart from one incident at six years of age).

Subject A expects his personal expanse of time to be very long--"The longer the better". He expects to live until he is "old, old, old!" Early in the interview he mentioned, "I'd like to live till I was 199". However, he also mentioned 80 years as his allotted time, and, "I'm a little under one-half way, it would be nice to think."

Temporal Zones

Subject A's TAT story was written in the present tense. In it he is identifying with himself as a boy and rationalizing past events. He stated that the action of the story spans ten minutes.

In response to the Circle Test, Subject A drew five circles in a sloping line:

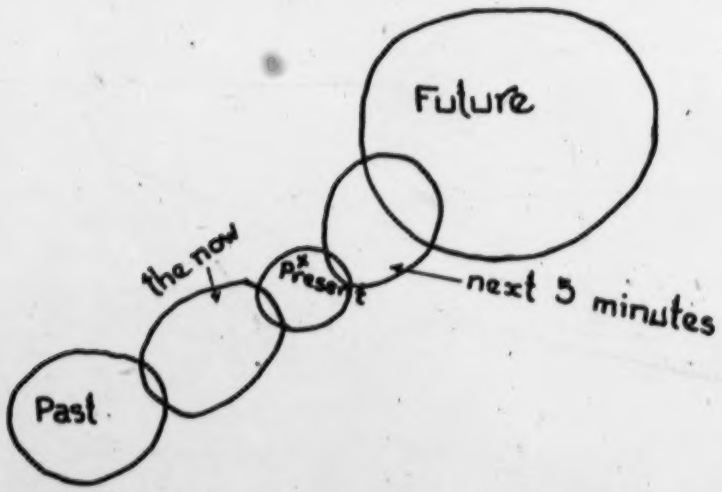

Figure 1. Subject A's Circles Test

The first, third and fifth circles are labelled past, present and future respectively. The second (which he calls "the now") and the fourth (labelled the "present-future" and representing the next five minutes) each overlap the circle that precede and follow. This would be considered an "integrated" configuration of time zone relatedness by Cottle. However there are indications that the circles representing the past, present and

future were drawn "atomistically" and later integrated by the addition of the second and fourth circles. The "past" and half of the "present" are shaded in. He comments, "The shaded area is what is 'full up'--I can't do much more about it, eh?" The "now", which is drawn between these two shaded zones is not shaded, suggesting it may have been an afterthought.

About the future circle he said, "I don't know, it's not there. There could perhaps be a little colour there, in terms of some of the decisions I've made now definitely affecting the future. But, basically it's wide open. It's large too. When asked what the size of the circle represents, Subject A replied, "the time that's left. I've got 36 years behind me, 12 of which are sort of airy-fairy in terms of what I can remember. But the future out there is wide open. It's much bigger than the now." In spite of this apparent emphasis on the future, he located himself in the present, on the border between the shaded and non-shaded areas. He gave further indication of an orientation to the present rather than the future when he declares, "I'm not very goal oriented. . .'finish your Masters'-it's the little things along the way. . .".

On the Lines Test, Subject A indicated that the present is the whole time between birth and death. This contrasts sharply with the present circle on the Circles Test, which is wedged between "the now" and the "present-future", which occupies the next five minutes:

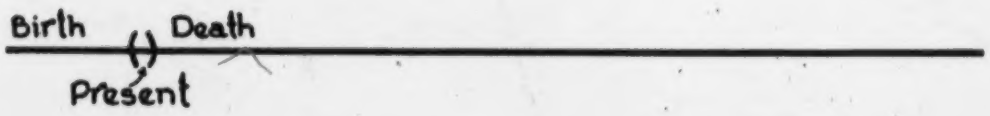

Figure 2. Subject A's Lines Test

When asked to give emotional associations and experiences associated with the stimulus words, Subject A responded as follows to the words past, present and future:

Past--"I associate immaturity with the past-although it was a lot of fun. Lack of stability, 'do my own thing' generation that lasted from the sixties to the seventies. I enjoyed life then, wouldn't change much; at times I wouldn't mind re-enacting those

'daze', but not necessarily re-living them."

Present--"For me it is always now-again sitting, waiting. Yesterday is past, tomorrow is future. I can't change past, don't have that great an influence on the future, so the present is my only real input. I can effect change in the now."

Future--"The big circle on the diagram. Not yet shaded, but hopefully long in a chronological sense and exciting and happy in an esthetic sense. Decisions I make now may affect the future but the certainty of that is no more certain than rolling dice."

When asked how he felt when he thought about each of the temporal zones, Subject A replied as follows:

Past--"I've lived it. I'm the way I am because of it." When further querried if he regretted anything about the past, he said, "No. And yet I've made some pretty dumb decisions-illogical decisions, hurting decisions. But at the time they seemed the most comfortable way to go-least line of resistance."

Present--"I feel a little nervous now, but I'm enjoying today. I'm purposely taking seven weeks off just to relax-golf. I walked in here today [to the Education Building] and have no regrets about not being here [taking summer courses]. I'm content; I'm glad to be alive."

Future--"I'm going to fill a void very quickly." He plans to do that by finding some people, "four or five people in a row to cement me up again". He is not looking toward a career change, but "something bigger than that-coming into a religion, settling down. . .I haven't made any decisions yet in that regard."

When asked to consider an important decision he had made and to select the temporal zone that was most influential in shaping the choice, Subject A selected, "What seemed right at the time", again suggesting an emphasis on the present.

When asked to complete the sentence stems in question six, he answered in this way: "The past is good for nothing--that's what comes to mind. The present is good for living and enjoying people. The future is good for contemplating-it allows you a fantasy."

Attitudes to Lived/Clock Time

Subject A declared, "There never seems to be enough time to do the things I want to do". He resents the limitations or restrictions that time places on him. "I don't wear a watch, never have. It's certainly not from any Indian belief that it happens when it happens. I guess I'm that way. I'll ask someone else, 'What time is it?' I don't know if I like the restrictions placed on me by a watch." He prefers to remain

flexible and available to people. "If you meet someone and they say 'Let's go for a drink.', you can't say 'I've got this at 9:00, that at. . .' I'll try and be there. Meeting a plane yesterday, I'm on time, but the plane is 10 minutes late. So (time) manipulates you. I don't believe I should be constantly manipulated. I eat when I want to eat, I make love when I want to make love, I phone up people when I want to phone up people, I call up a kid to the office 'cause I want to see him now. I change plans quickly. I'm not one for schedules. Although one of my jobs is making up schedules for everyone else."

For Subject A time passes at an irregular pace. "The things you enjoy seem to go quickly. The things you dread seem to take a long time." However, this isn't problematic for him. "If a task has to be done, get it done, particularly if you're not enjoying doing it." He feels that his time is definitely different from others around him. This difference seems to be connected in some way with a philosophy that he carried over from his youth-"If it feels good, do it." He describes himself as "gut oriented" rather than a "logical thinker". "We used to get away with that when we were 20. But today people seem to be much more conscious about their space and the frame that they're in. So, I think I'm out of 'sync' at times with what is going on."

Attitudes to Death

When presented with the stimulus word death, Subject A began to write about the death of a friend rather than looking at his own death. He is aware of his avoidance of this topic. "I never took the time to look inside that box (death); fear of reality of death, his death, and the quickness with which it comes." He referred to another friend who "beat back death" by "fighting for life" after a car accident. In reference to the one time he considered suicide Subject A says, "It happened-out of character, because I always have loved living, and the thought of death sort of abhorres me. It's a waste." When the thought of suicide passed, "I pulled over to the side of the road and literally got sick. But I just about put my nice Thunderbird under a semi-trailer truck! It was a bad day!"

When asked during the interview about his thoughts regarding his own death, he replied, "I respect the finality of it. It's over, as far as I know right now. I don't think I fear it because you walk into that situation. Troubles me, ya, but I don't fear it." When presented with the multiple choice alternatives in question seven, he observed that alternatives f) and g), which refer to accepting death and looking forward to death respectively, "sound like you're 60". He summed up with the words

"finality" and "respect". The reader will recall that he expects to be "old, old, old" when he dies. "And in good health. I wouldn't want to be hooked up to machines, but as long as my health stays, God, give me longevity!"

In reference to the stimulus word immortality, Subject A wrote, "I always feel like the Doubting Thomas. Uncertainty, that's it. I would love to know the future is forever, but I don't spend hours contemplating it." He expressed more certainty however, when speaking of the finality of death. He suggested that the uncertainty arose from our conversation and from another he had had recently with friends of the Bahai faith regarding life after death. However, "normally if someone would ask me, I'd say, 'Well, I haven't made up my mind yet. Right now it's an intellectual game to me.' "

Religion or Spirituality and Time

Subject A is considering joining the Bahai faith, but is having a lot of doubt about himself and "a commitment to a faith or a religion, because I'm not a very committing person. . .I don't know if I could live by the rules and the bounds. It's very interesting intellectually right now for me." He made a commitment to a religion in the past, having trained as a Roman Catholic priest. He "ended up out of" that commitment. "Way back, when I was young, I lived by the fear of God, but not any more." "I don't believe in a God-given code. I can talk about it candidly. I have a respect for people that operate that way, I suppose. But I would not say I'm religious, or spiritual."

When asked about the practice of prayer or meditation, Subject A recalled a psychology course he had taken. "I did a lot of meditating, a lot of touchy-feely stuff, and I enjoyed the touchy-feely stuff-if that's how religion or spiritualism was meant." He volunteered that he doesn't feel comfortable with the concept of a higher power, "Because I've got enough confidence in myself that I believe that if anyone is going to make a change, it's going to be me. So, I'm my own God? That sounds bloody irreligious, but free choice is there."

Unusual Experiences Associated with Time

Subject A reported no alterations in or unusual experiences of time other than that of time going by more quickly when he is enjoying himself and more slowly when he is dreading something. When asked about any deja vu experiences he mentioned that "with some people the meld, the bond, is complete so quickly, it's almost like

you've been there before." He suggested this may be because they remind him of someone and he can't "put his finger" on who. This experience seems to be related to getting to know someone in an intimate way very quickly.

Meaning of Time

"The sand falling through the hour glass too quickly" is the metaphor Subject A chose to represent time. When asked to define time, he said:

> Progression comes to my mind. Everything has a season. My life has been seasonal. I've had winters-some pretty damn cold ones. I've had summers, in terms of emotions and things like that. So, I think it's phases-a direction, a progression, not necessarily always upwards. You can retreat, go ahead.

Summary and Evaluation-Subject A

Subject A's view of time is expansive. He considers his personal time a small part of "the whole range of time" (universal time). He says he sees time as having no beginning or end, and as being more circular than linear although all the images he uses are linear.

Apart from a single vivid memory at age six, Subject A has awareness of 24 or 25 of his 36 years. He expects to live until 80 years of age, but would like to live longer.

He drew an atomistic configuration of circles representing the temporal zones, indicating minimal relatedness among the past, present and future. However he then "integrated" the time zones by drawing two more circles which occupied the spaces between the zones. The future circle was largest. He indicated it represents "the time that's left". This largeness of the circle representing the future may relate more to his wish for a large quantity of future time, rather than any qualitative emphasis on the future as Cottle would suggest. In fact, he indicated a certain disinterest in the future when he declared, "I'm not very goal-oriented". He takes a helpless stance towards the future, suggesting that fate or chance will play a large part in determining his future. He abdicates responsibility for any influence he will have on the future. Similarly, Subject A appears to be detached from his past. He has no regrets. He enjoyed life and did what was most comfortable for himself. "I am the way I am because of it."

Subject A seems to be overwhelmingly oriented to the present temporal zone. His TAT story was written in the present tense. On the Circles Test he located himself

in the "present", on the Lines Test he represented the present as the whole time between his birth and death. He declared the present to be the only temporal zone on which he has an influence. While reflecting on an important decision he had made, he selected the present as being the most influential. The present provides Subject A with considerable enjoyment. "I'm content; I'm glad to be alive."

Subject A's dominant attitude towards time seems to be resentment about the limitations or restrictions that time places on him. He likes to remain flexible, spontaneous, even impulsive. Because of the requirements of schedules and of time as measured by a clock, he feels manipulated. Subject A experiences time passing at an irregular pace in the classical way: "The things you enjoy seem to go quickly. The things you dread seem to take a long time". He feels that his time is definitely different from others around him. He says he is more likely than others to follow the instinct of his youth, "If it feels good, do it".

Subject A prefers to avoid the topic of his own death. He fears the reality of it. He respects the finality of death, believing that "it is over" with death.

Although he is toying with joining the Bahai faith, Subject A claims not to be religious or spiritual. The Bahai faith is interesting intellectually, but he doesn't like "the rules and bounds" of a religion. He doesn't believe in "a God-given code", so it is unlikely that his attitudes about time are influenced by a religious code. His lack of comfort with the concept of a higher power seems to be related to his confidence in himself.

He reported no alterations in, or unusual experiences related to time.

The symbol he chose to represent time was that of "sand falling through the hour-glass too quickly". This suggests he experiences time as moving faster than he feels comfortable with. When asked to define time he spoke in images: seasons, phases, a direction, a progression, not necessarily always upwards. "You can retreat, go back." This is a linear image, quite different from the circular nature of time he suggested earlier.

Subject B

Personal Data

This subject is a male, 28 years old, married and without children. He is a professional musician and has completed one year of university. He was born in a city on the west coast of the United States. He crossed out the heading "Religion" and

volunteered, "I follow the path of Eckankar, the ancient science of soul travel."

Themes

Expanse of Time

In terms of his personal time, Subject B spoke of ". . .the many lifetimes one has likely spent on this planet, or on other planets, in the worlds of time and space." He also has a view of time beyond physical existence. When he speaks of former lives, he doesn't necessarily mean physical lives. "I think we spend lives on the other planes where time is a different, relative thing, the speed of time goes by differently." The rules of time apply only on the lower planes. "I think this is the physical plane and when one leaves the physical plane we call it death, and one moves up to the next plane of vibrations." Subject B claims that memories of past lives are there, but ". . . are kept from us until we are experienced enough to find them." He is also prepared for future lives.

Subject B said his earliest memory (in this lifetime) is of being a few months old. His sensory memory is strong.

> I remember a crib and a cradle and I remember all the brightly coloured toys, and the room, and the house, and the smells and the music too. I can remember taste too. I hated baby food-just gaggy stuff! I can remember a little bit of outrage. "What have I got to do this for?" And gradually that sensation will leave. It's directly related to the closing of the opening of the head. While it's still open you're not there all the time. You can leave very easily. But once it's closed, it's a lot harder to leave. You have to make a conscious effort.

If memory goes back to infancy for this subject, he may be considered to have lived with awareness for all of his 28 years.

Subject B chose not to consider when he might die. "I don't look for my translation (death), so I don't see it or create it." He does not wish to focus upon the possible length of his personal time (in this lifetime). He marked his birth on the Lines Test time line, but not his death. He drew a line which crosses the time line at his birth, parallels the time line and extends beyond it.

Subject B's view of universal time is also very broad. When asked if time has a beginning or an end, he replied:

> In a way, yes, because these worlds of time, energy, space and matter that we exist in now won't continue to exist forever, according

> to my studies. I'm convinced these lower worlds are periodically destroyed every so many million years, and everything in the worlds of time and space ceases to exist. Those units of awareness that we call souls, that we are, are drawn up to the soul plane. All of the energy, matter, space and time cease to exist. And then the cycle will repeat itself, and then it will be created again. In that sense, certainly, there's no beginning and end of time from the soul plane, because there is no such thing as time there.

Temporal Zones

When confronted with the TAT picture of the boy looking down at a violin, Subject B was unable to make up a story. Later, during the interview, he volunteered that he related closely with the picture.

> That's kind of a familiar situation. I remember as a child doing the same thing-when I just couldn't practice, sitting with the music and the violin in front of me, just waiting for something to happen, for some inspiration. Teachers were ambitious for me, but there were times when I reached a block, just didn't feel like going on. And that's the feeling I got looking at the picture.

So the thoughts evoked in Subject B by the picture were of the "present" of a boy, and covered a short time. However, Subject B connected the boy with his own boyhood, so was also writing about his own past. These thoughts also relate directly to the experience of the subject as he attempted to write a story in response to the TAT picture, that is, his present experience.

In response to the Circles Test, Subject B drew three concentric circles:

Figure 3. Subject B's Circles Test

The past is in the centre and is surrounded by the present, which in turn is surrounded by the future. Cottle refers to this as a "projected" configuration of time zone relatedness. This suggests the subject perceives a strong connection between the time zones. Subject B commented, "the past is solidified, the present is liquid and the future is gaseous".

On the Circles Test Subject B drew the future as the largest circle, the present as the second largest and the past as the smallest circle. He located himself in the "present". He explained:

> My awareness right now is in the present. Normally I would try to keep it there. Of course, when I'm reminiscing or if I'm caught on a track of pictures, looking at images from the past, then I'm in the past. On the other hand, if I'm planning something-a concert season-right now, then I put myself in the future. I used to spend a lot of my time in the future, maybe more than half of it. It's changing. I must spend a lot of time in the past-seeing my old friends in the southern California area.

On the Lines Test Subject B didn't mark the boundaries of the present. He wrote, "There are no boundaries on the present. Depending on where you want to look or where your attention is, you create your own boundaries."

Figure 4. Subject B's Lines Test

In response to the stimulus words relating to the temporal zones, Subject B replied as follows:

Present-- "Eternity, it is always right now."

Past--"It can be the present if given enough attention; generally to be learned from."

Future--"It can be whatever we choose to create."

During the interview Subject B elaborated further:

> The past is like looking at pictures that come from this lifetime, other lifetimes. The present is when you are creating pictures or

> planning-and we humans spend a lot of time doing that-thinking of the past and thinking of the future. And yet we are always existing in the present, if you think about it. When you think about what you would like the future to be you are giving it reality. You are creating, because you are bringing it into the present. In that sense you're putting it into the mental plane, and over a period of time, after you've thought about it, and you feel what it's like, eventually you find it happens in the physical plane if you hold the idea strong enough.

When asked what feelings were aroused by each of the temporal zones, Subject B replied as follows:

Past--"The feeling is oldness, having been through a lot, having a lot of experience."

Present--"I feel rewarded. I feel happy. It changes. The present is a big concept. Sometimes I feel neutral. But I don't really feel bad about the present. I feel like this is a place that is alright. I'm glad to be here."

Future--"I think it is wonderous. It's as good as my imagination. I think there's no limit on it. For me I see what could only be a fantastic future."

When asked to select the temporal zone that was most influential in shaping his choice when making a major decision, Subject B replied:, "To a large extent it's all three, but certainly the present was the deciding factor that tipped the scale."

When given the sentence stems to complete in question six, Subject B replied, "The past is good for realization. The present is good for beingness. The future is good for purification of the soul."

Attitudes to Lived/Clock Time

Subject B explains much of his experience of time in the language of Eckankar ("the ancient science of soul travel"). For example, he expressed the belief that time is of the "lower planes-the physical, the emotional, mental or even the causal. But from soul [a higher plane] it's always right now; there's no sense of time. It's like eternity." He definitely has experienced time moving at various speeds:

> We can experience it moving at different speeds depending on how our thoughts are. If we're thinking a lot (in the mental plane) time can go very slowly. If we're doing something physical, not thinking, then time moves at a different rate. If it's an emotional experience, a love, some romantic situation, time moves differently.

As an example of a situation in which time moves slowly for him, he described the job he did the day before:

> We were all tired, and the conductor was having a hard time putting

> the beat at the right place, and following the soloist. He kept stopping, so we didn't get any continuity. The feeling of time was very slow. I kept looking at the clock. The clock is your constant reminder of time.

In contrast Subject B suggested there are times when time stands still:

> And that's a lot different than it going slow. It happens when one's not thinking, not feeling, but just experiencing knowingness of the soul. That happens to me quite often in musical experiences. Not so much when I'm involved in playing. But when I can sit back, close my eyes, get comfortable and not have the body reminding me it's there. My awareness, then, is that there is no time.

Subject B takes a very broad view of not only universal time, but also his personal, lived time:

> Well, it's a long thing, you know. Who knows how many thousands and millions of years and many lifetimes we've had to get to this point. And how much longer it'll take to get to the next point. But when one gets a certain awareness of what's gone before, one has a desire and urgency to continue, to move it along.

This subject considers a circle more symbolic of time than a line. "We're always travelling in circles, but travelling in a line. . .to me would indicate something that's open-ended." This representation is consistent with his suggestion that there are cycles relating to time:

> I know seven-year cycles. Large changes happen to me every seven years, and I've read that they happen to most people. I'm convinced that there are cycles in terms of minutes. It just depends whether we want to tune ourselves to every cycle and be aware of it. . .When I ignore those cycles I usually run into a little difficulty, unknowingly.

Subject B suggested that we feel comfortable with time, because:

> In the worlds of time and space it is ingrained that we must have time. From the inexperience of never getting outside time there's a fear. I relate it directly to inexperience. I found it that way too, until I had learned to just let go and not allow fear to influence me.

Attitudes to Death

Death is something Subject B believes he has experienced many times already.

He suggested, in response to the Stimulus Words, that death is "an illusion-shedding a body". During the interview he elaborated:

> I've seen lots of people leave this physical plane, and I just don't think of death as being a negative thing. . .When I leave the body, whether it be for ten minutes or an hour, or for good, then it's a death of sorts.

Immortality is considered by this subject to be "reality". "The soul is immortal. It is real. We could have a blowtorch taken to us-wipe out the physical body, but soul is indestructible."

Because of his experience on other planes, and in former lives, Subject B does not fear death:

> One of the big things in this world is the fear of death. Everybody is concerned about when they die. It's such a big mystery. When you know what's there already, when the time comes to shed this body, when it's no longer functioning, instead of it being a painful experience, you can just step out of it.

It will be recalled that he would not suggest when he might die. On the Lines Test, he commented, "I don't look for my translation (death), so I don't see it or create it." In fact Subject B claims not to have given it much thought. He said that suicide looks like an escape, but it's not. "I see it as copping out, trying to escape their responsibilities. They're going to find themselves back in the same situation, so fast. They're not going to get a rest."

Religion or Spirituality and Time

Subject B was raised in a Southern Baptist home. He feels that the concept of "sin" and the resulting guilt were used to control and inhibit him. "I'm still learning how to fight off all of those guilts and inhibitions that were impressed upon me from birth." He now describes himself as spiritual, but not religious. He "follows the path of Eckankar". Many of his responses to the questionnaire and the questions discussed during the interview were expressed in terms of the teachings of Eckankar, so they are clearly an important part of his belief structure. His concept of God is ". . .not a male or a female, it's an impersonal force". This force is represented by the living Eck Master. "There is only one at a time on the planet, who is the clearest channel for this flow of energy that is called the Eck."

Subject B practises a spiritual exercise he calls contemplation which results in

alterations in his experience of time:

> We can focus on one of three beings. If we get ourselves in tune in the right way, keeping our attitude and awareness on the present, then we can have experiences outside the physical. You go beyond a passive state. You move, you travel, you go somewhere. You experience something.

This experience will be further described under the next theme.

Unusual Experiences Associated with Time

Several of Subject B's unusual experiences associated with time have already been described under other themes. For example, he talked about past lives, time passing at dramatically different rates, and time standing still. His conviction that one can choose the future by giving what one wants the appropriate focus in one's imagination in the present could be considered an "unusual" influence of the present on the future. "Some people don't realize that they have the freedom to choose their own future or their destiny."

Subject B's experience during contemplation is of there not being a feeling of time:

> When you come back to the physical (from the soul plane) you may look at the clock and see that an hour has gone by but you have no feeling of an hour having gone by. It could be a feeling of a week, a month, a year, or no time at all.

He enjoys the freedom to choose the plane out of which he wishes to operate. "My experiences in those higher planes are quite wonderous, and it makes me want to stay there rather than come back here."

This subject reported that he has many precognitive experiences, but he preferred not to talk about them because they were for him alone. "Actually, those are happening more and more now. But, I am charged with keeping them under wraps or else losing them." Deja vu experiences happen often for him. "That's just a feeling of your past, I think. On trips it happens quite often. When I'm in a groove, doing the same things day in, day out, the sense of that is lost certainly."

In reply to the question about whether his time is different from the time of others, Subject B said, "We all have our own little universe; we operate from different viewpoints. Time awareness is different for everyone."

This subject has a desire for even more unusual experiences associated with

space and time:

> The Eck Masters are not bound by space and time, and can be in any number of places at the same time and can travel instantaneously. That's something I'm shooting for. I would like to have that, you know. I have little glimpses. There are times when I feel like I'm in more than one place at the same time, and have several viewpoints, or even a 360 degree viewpoint instead of just out the front of the skull.

Meaning of Time

In response to the stimulus word time Subject B wrote, ". . .passage of events in the lower worlds". He stated during the interview that "the clock is your constant reminder of time". The symbol this subject chose to represent time was the face of a clock with markings for each hour, but no hands. He remarked, "It is significant that I didn't put hands on it because I don't think that it's a particular time." A circle is a more meaningful representation of time for him than a line.

Subject B suggested that time has a different meaning on different planes. "On the other planes (outside the physical) time is a different, relative thing, the speed of time goes by differently." Not only is time relative ". . .to the lower worlds", but ". . .to the passage of events in particular. If there's no motion from our point of view, we can stop time, or we will have no sense of time." In summary he stated:

> From each person's viewpoint it's a perception of the passage of events. It doesn't have to be physical events. Time is different on different planes. You can have a feeling of time in thought too. When you have a series of thoughts going by there is a passage of time as they go by. The same with feelings. It's certainly easiest to look at it in terms of the physical. You see a tree sway in the breeze, and there is obviously a motion. So time is related to motion. The motion can be physical or it can be your mind in motion, or feelings.

He also considers space to be closely related to time and an illusion created by the lower worlds, just as time is.

Summary and Evaluation-Subject B

Subject B's view of his personal time is very expansive. He speaks of the "many lifetimes (over thousands and millions of years) one has spent on this planet or on other planets, in the worlds of time and space". He is prepared for future lives as well. He also has a view of time beyond and apart from physical existence.

His view of universal time is also very broad. However when asked if time has a beginning or an end, he said, "Yes". He is convinced that the "lower worlds (of time, energy, space and matter) are periodically destroyed every so many million years". However, he sees "the units of awareness that we call souls" as being preserved by being drawn up to the "soul plane" where time does not exist. Thus, his personal time (because he considers himself to be a soul) might be considered to be more expansive than universal time.

He claims his earliest memory ("in this lifetime") goes back to infancy, so he would consider himself to be aware of all of his 28 years. He chooses not to consider when he might die.

Subject B drew a "projected" configuration of circles on the Circles Test, suggesting he perceives a strong connection between the time zones. His comment that the past is solidified, the present liquid and the future gaseous suggests he sees the time zones as different forms of the same material. The future is much more fluid than the past.

Subject B is aware he has a choice of where to orient himself in the temporal zones and is able to consciously change zones. Normally he tries to keep his awareness in the present. On the Lines Test he doesn't mark boundaries around the present. He suggests that we create our own boundaries depending on where we place our attention. He suggests the past (in the form of pictures) can be made present if given enough attention. The future is something he considers we create for ourselves. We make the future a reality by thinking about whatever it is we would like the future to be.

In spite of his writing the TAT story in the present of the boy, his insistence that he tries to keep his awareness in the present and his selection of the "present" as the time zone that was most influential in shaping his decision, this subject shows a strong affinity for the future. He believes it can be whatever we choose to create. It is his largest circle on the Circles Test. The future seems to arouse his strongest feelings. Although he feels happy and rewarded in the present, the future "can only be fantastic. It's as good as my imagination. I think there are no limits on it." He has given the future much consideration and approaches it with wonderment and anticipation. The past is merely a source of learning and experience.

The teachings of Eckankar are very important in Subject B's description of his experience of time. He suggests time is experienced differently depending upon which plane (physical, emotional, mental, causal, or soul) one is occupying. It can move

slowly if one is thinking a lot, that is, in the mental plane. He has also experienced time standing still "when one is not thinking, not feeling, but just experiencing knowingness of the soul". This happens often when he listens to music, and involves an awareness that there is no time.

Subject B considers a circle to be more symbolic of time than a line. Time is cyclic rather than linear. He suggests that we feel comfortable with time because we are taught by our culture that it is part of this world. We have a fear of leaving time because of our inexperience with timelessness.

He considers death to be an illusion, the "shedding of a body". It is immortality that is reality. "The soul is immortal, it is real." He feels that he has experienced death already. "When I leave the body, whether it be for ten minutes or an hour, or for good, then it's a death of sorts. He doesn't fear death, but doesn't look for his "translation". He claims not to have given it much thought.

Subject B describes himself as spiritual, but not religious. This distinction must depend on his not defining Eckankar as a religion, as these teachings are clearly important in shaping his belief structure. His concept of God is "an impersonal force represented by the living Eck Master". He practices contemplation which results in alterations in his experience of time, in fact, an experience of "there not being a feeling of time". By choosing the "plane" out of which he operates, Subject B in fact is choosing between being in or out of "time". His experiences of higher planes (being outside time) are "quite wonderous and it makes me want to stay there rather than come back here". He has had many precognitive experiences but wishes to keep them to himself. He dismisses his frequent deja vu experiences as "just feelings of your past". He declares that "time awareness is different for everyone. . .we all have our little universe". Subject B has a desire for even more unusual experiences associated with space and time, such as instantaneous travel.

A clock without hands was the symbol chosen to represent time. He considers time to be the "passage of events in the lower worlds". He relates time to motion. "The motion can be physical or it can be your mind in motion, or feelings." He also considers space to be closely related to time, since both are illusions created by the lower worlds. Timelessness may be considered to have meaning for this subject, just as time has many meanings. His experience of time is rich and varied and can be described as highly unusual.

Subject C

Personal Data

Subject C is male, 44 years of age, married, with one child. He works as a designer and teaches at the college level. He has completed a Bachelor of Fine Arts and is progressing towards a Masters degree. He was born in urban Ontario and declares himself to be without a religion.

Themes

Expanse of Time

The time spanned by Subject C's TAT story was "very, very small". He volunteered a distinction between personal and universal time. Personal time is his lifetime, his career. It is "finite, manageable time". Universal time is "great, infinite". In the "universal view", the "present" would be microscopic. On the Time Line, Subject C indicated his lifetime to be a small part of the whole (0.2 cm of the 15 cm line). He is keenly aware of an expansive past, "We're talking hundreds of years or thousands of years." Although he claimed, "I am interested in projections for the future.", his view of the future seems to be less extensive:

> I think there's much less a sense of the future that I have to go on. I can see indications of patterns, maybe. But so much seems to be up to chance and to "incident", creating some sort of a fluctuation--the little insignificant details that change the course of history, that I worry less about the future.

When he speaks in this expansive way about time, Subject C is referring to universal rather than personal time.

> If anything I am insufficiently interested in my own past, I'm told. I should be more interested in family matters and breeding lines and all the rest of this nonsense, and that doesn't hold my interest and never has.

When asked if time has a beginning and an end, this subject replied:

> At times I think so. It's the only way I can make it tidy enough to hold it in my head. I cannot conceive of the beginning of time, that split second or whatever before then. . .and I cannot conceive of anything after it. But I do conceive of it in a linear form.

Subject C's earliest memory is of an incident of about fifteen seconds duration which happened when he was two or two and a half. "It's of a garage wall or door,

with some birds flying around. I think I was feeding the birds with my mother." Visual details are clear, although he is uncertain about whether there is a memory of colour or not. It is a very sunny day, and the door and birds appear to be white and grey. He is cautious about "layering" on this memory elements which ". . .are starting to come out of my imagination". For example, he doesn't have any sense of himself in this scene, and is skeptical about early memories at ". . .a very sophisticated level". With his earliest memory going back to age two, this subject may be considered to have lived with awareness for 42 of his 44 years.

He indicated he may die either two or three years from now, or at 65, 75 or 85 years of age. This suggests he hasn't a clear expectation of how much personal time he has left. About "immortality" Subject C said, "I have no particular handle on it, nor any particular interest in it. . .too busy with my own 'grain of sand' existence." Although he didn't make an explicit statement, this subject alluded to the finality of death. That is, he likely hasn't any expectation of "personal time" beyond death.

Temporal Zones

Subject C's TAT "story" was written in the present tense, and constituted a response to the visual image of the boy. The quality of the image is important to him, and suggests a "cliche", a "1930's or 40's film image of either social dilemma or historical profile". This reference to an earlier "style" suggests an element of the past in his response.

In response to the Circles Test, Subject C drew three separate circles:

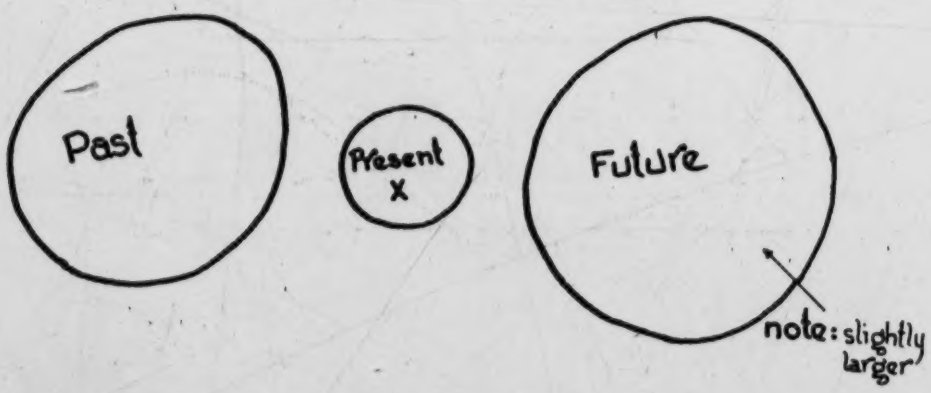

Figure 5. Subject C's Circles Test

The present circle is the smallest. The past circle is much larger. The future circle is marginally larger than the past. Cottle refers to this temporal relatedness design as "atomistic". It suggests minimal relatedness between the time zones. This subject located himself within the "present" circle.

On the Lines Test Subject C marked the boundaries of the present well outside the boundaries of his own lifetime, that is, his own birth and death, and close to the ends of the time line. This leaves relatively small spaces to represent the past and the future. He commented, "The present embraces much more than my lifetime--the ends become relatively infinite, or significantly larger." He further suggested that not only is the time outside the limits of the present "elastic", but, "the present tends to be elastic as well."

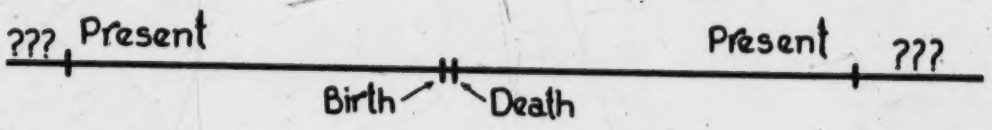

Figure 6. Subject C's Lines Test

In response to the stimulus words relating to the temporal zones, Subject C replied as follows:

Past--"A rich collage of people, places, and ideas-somehow never quite dead as one continues to 'rediscover' or 'reinterpret' facets of the past. I never have much sense of distance though, five minutes or five million years not finally all that important. Differences or changes are though. I used to have more sense of 'pattern' or stasis to past because it was somehow 'complete'. In the past five to seven years this has left me. . . Also for some reason, a sense of 'smell' (not bad, or old, but rich)."

Present--"Temporary, transient, often passing with ungovernable speed."

Future--"Unexplored territory--sense of the infinite. Sometimes in doubt with reference to political situations. Occasionally associate it with recrimination, oddly enough, seldom with vindication. Personally do not look forward to retirement and old age."

Subject C volunteered earlier that he has much less sense of the future than of the past, because ". . .so much seems to be up to chance and to incident". Because of

this, he has difficulty setting down plans. "I have great difficulty in long term, or even short term (planning)-immediate-for the next two days, I can sort of get that one organized, and not much more."

When asked about the feeling he associates with each of the temporal zones, Subject C replied as follows:

Past--". . .a kind of warmth. . .a golden glow that would infuse everything." This subject is aware that he tends to idealize the past. "There is a tendency to say, 'Hey, things were so much better back then.'" He then reminds himself, "Well, then seems an awful lot like now. We just use different words for it."

Present--"Perhaps a slightly sharper focus. A more immediate sense of not having a full picture of what's happening. . .The present is less complete, but certainly more immediate-closer physically." He is aware of a shifting focus on the present. "There are times when I have a feeling of drifting, and there are times when reality and the present seem much crisper."

Future--"Slightly cooler. More of a feeling of expansion-broadening horizon." He is also expecting 'change'. "That's not looking for change, it's simply saying there is an evolutionary process that goes somewhere and the shapes will be different." He also expresses some fears about the future. "I worry sometimes about dropping (his son) into what could be some kind of a maelstrom."

When asked to choose the temporal zone that was most influential in shaping a major decision he had made, Subject C replied:

> In this instance it would be the future. Then ranking them-maybe the present, very closely followed by the past. They were all elements. Present and past tend to colour rather than determine specifics of the plan.

In response to question six, Subject C completed the sentence stems in the following way: "The past is good for learning. The present is good for living or experiencing. The future is good for dreaming and hoping."

Attitudes to Lived/Clock Time

Subject C expressed a strong feeling of being out of rhythm with time-clock time, other people's time and even his own time earlier in his life. In response to the Stimulus Word time he said, "It is occasionally my enemy, but often totally disregarded. . .seems to go very (too?) fast most of the time, occasionally at a

reasonable tempo, very occasionally goes too slow."

As if to demonstrate his uneasy relationship with clock time, this subject volunteered that he doesn't wear a watch. "I have a watch; I did buy a watch. It is sitting in my office and it beeps every day. . .I can't get the alarm off. I can't get the correct time out of it." He associates the need to be aware of clock time with his responsibility to others, for example, his students, his family. He often loses track of time, ". . .discovering it's midnight rather than seven or eight o'clock, or that it's Wednesday rather than Tuesday or Friday."

When asked if he has ever felt that his time is different from that of others around him, Subject C replied with an emphatic "Yes". He referred to the contrast between himself and his wife, who is much quicker-paced. He attributes this difference to a speeding up on her part, and a slowing down on his own, over the past three years. He can't attribute his own change in pace to any particular occurrences or external changes. He feels it is the result of "an internal change, an ageing process." He describes it as "a stammering in relation to time". As if to symbolize this feeling, he says there is "literally a stammering I am developing in my speech pattern."

> I've slowed down. I'm enjoying the passing moments more-the stuff I didn't have time to see before. . .I have become more comfortable in a box where I have less desire to go outside because there is enough stuff inside to keep me busy, and I think meaningfully. It's not just a matter of routine effort. It's a matter of blundering around in a rather dark room. And things happen, and things don't happen, and things happen in a way that I don't expect them to, sometimes. And It's very interesting. About 70% of my life, I think, I spend observing. I tend to be a passive person, which means I've got to crank up a performance in terms of (my work). That has a certain-not artificiality-but an element of having to push myself."

As further evidence of his feeling his time to be different, he reported, "I have a feeling there are certain elements of me that really would have liked to have been born about 500 years ago, and other parts of me that very definitely would not like to have lived at that time."

Subject C conceives of time in a linear form.

When asked if time goes by at a regular pace, he replied:

> It goes by faster, in its irregular way, in moments of stress. It is elastic. Give me a lot to do, and I will at least convince myself that I have done a lot of things, and that I have done them in a fraction of the time it would take me to do them ordinarily. When time goes slowly, it tends to be when waiting for something unpleasant-waiting

in uncertainty.

He suggests that he is able to change this voluntarily. "It is possible for me to distract myself by visual stimuli or by auditory stimuli. It becomes a matter of busying myself."

Attitudes to Death

Subject C sees death as a "termination, loss, often a waste. A sense of stillness and a change of scale in the 'landscape' that might be time. Horizons stretching to infinity (somewhat impersonal)." He admitted that although he has "never found death to be romantic or appealing" he has "a morbid curiosity from time to time with the trappings and customs surrounding death". He says he has no particular interest in immortality, and has "no concept whatsoever of anything after death". He does, however, express a desire that his death becomes "constructive". For him this means that "whatever is physically left of me gets utilized medically." His immortality would consist of his serving a purpose, in a very concrete way, as an organ donor, as a cadaver, as an "exhibit" from which others could learn. This would give him a "continuity".

When asked which statement in question seven best describes his attitude towards death he replied: "At times, 'Troubles me, but wouldn't say I fear it.' 'I don't give it much thought.' It's a fact." Subject C's attitude has been shaped by a "near miss situation" that occurred about 12 years ago. "At that point I had the instant replay and I realized I'd had a lot of very good things happen. I'd enjoyed it. I'd made a reasonable job so far, and if this is it, O.K., fine. From that moment on I have thought, 'When it comes, it comes. I'm ready.' " Although he says he's not particularly concerned about leaving this world, he hopes to "be functional to the last". "I don't want to be messed with, or be a further burden to society."

Religion or Spirituality and Time

Although he came out of an Irish Protestant background, Subject C declared that he has no religion. Nor does he consider himself to be spiritual. He practises no disciplines, such as meditation or contemplation, which might be associated with spirituality. "It doesn't seem there is the time for it." He refers to aesthetic experiences, such as looking at an oil pattern or a blade of grass, as restful and renewing, but "it doesn't transcend what I'm processing internally."

If there is a God or divine presence or purpose, that's fine. Welcome

> to it. . .It's not a matter of saying 'There is nothing.' I just haven't formed a connection with it, or it hasn't with me! . . .I certainly am surrounded by people who do have that kind of attachment, motivation--who are sparked with a divine fire. They often times are called artists. I'm not an artist. I don't go beyond a certain mechanical aptitude. I don't make the quantum leaps. An artist has something that informs what they do. They burn with an incandescence.

Subject C is describing a creative "spark" which he associates with spirituality. "I don't think it has to restrict itself to art-any time you have that sense of 'Here is an extraordinary person.' "

Unusual Experiences Associated with Time

Subject C reported a "mild" precognitive experience. It took the form of a childhood dream which recurred over four or five years. It was little more than a scene:

> . . .a turn in the road in a mountain area, with a gas station on one side. It never made any sense. One time when we were travelling through the States-we'd never been in that area before-it occurred. It wasn't a spectacular or in any way unusual image. . .it simply was something that suddenly clicked into focus and we moved past it. . .I got scared at that point, because I had another couple of nightmares that had recurred and I really did not want them to come true.

When asked about deja vu experiences, Subject C said, "There has been the odd time in conversations, usually reinforced by physical relationships in my field of vision. Again that tends to be a very fleeting thing, and I haven't had that for at least ten years now." The only other "unusual" experience in relation to time he reported is his losing track of clock time.

Meaning of Time

In response to the stimulus word time Subject C wrote, "A disembodied, disinterested factor in reference to human existence. Occasionally my enemy, but often totally disregarded. Measured when dealing with responsibility to others."

When asked "What symbol or metaphor is representative of time for you?", Subject C said:

> A growing, changing organism such as a tree or plant or a change in state of something like forming rock. Not human or animal and subject to subjective, psychologically induced change or reaction. A river possibly but only in the context of a developing bed or pattern-prefer the tree, I think.

During the interview, when asked to define time, he offered another symbol, "a chain, which has a linear form to it, but is made up of interlocking pieces". Then he returned to the image of a growing tree "as a study in time":

> You are looking at a developmental process-a force, a flow, a channel, something that has a dynamic to it. Not a cross-section. That's static. . .There's a central core. It's either organized this way or you could turn the whole thing upside down. Or you could take the root structure and it's organized that way. There's a flow both ways, and both are necessary. And it doesn't look the same everywhere, even under a microscope, even with repeating cell patterns. It's a pattern that's repeating, but every time it repeats it's slightly different. It is anything but static. It is not complete from one end to the other, unchanging, like light.

Summary and Evaluation-Subject C

Subject C has a narrow view of his personal time and a somewhat broader view of universal time. He volunteered a distinction between personal and universal time. The former he considers to be "lifetime, career, finite and manageable". The latter is "great, infinite". He indicated his lifetime to be a small part of the whole time line. He is keenly aware of a universal past ("thousands of years"). His view of the future seems to be less extensive. "I worry less about the future... .so much seems to be up to chance." He claims his personal past is not important to him.

He said that at times he thinks of time as having a beginning and an end, although he cannot conceive of what was before the beginning or of anything after the end. His earliest memory happened when he was two, so he has awareness of 42 of his 44 years. He hasn't a clear expectation of how much personal time he has left. He alluded to the finality of death, having no concept whatsoever of anything after death. His "continuity" would be provided by his body being utilized medically. A life-threatening incident many years ago prepared him for his eventual death. He was left with a lack of fear of death, although it (death) does trouble him.

His TAT story was written in the present tense with tinges of the past. He drew an atomistic configuration of time zone circles, suggesting minimal relatedness among the time zones. He located himself in the present, the smallest circle. Interestingly, he marked the boundaries of the present well outside the boundaries of his own lifetime on the Lines Test. He reported that outside the limits of the present time is elastic. "The present tends to be elastic as well." He seems to be speaking of the universal rather than personal present. By contrast, he later described the present

as "temporary, transient".

For this subject, the past seems to be alive and rich and changing-"never quite dead as one continues to rediscover or reinterpret facets of the past". He claims not to have much sense of distance from the past. He volunteered that he has much less sense of the future than the past. He associates a feeling of warmth with the past, and tends to idealize the past. The present is "less complete". At times he feels he is drifting in the present, and at other times it is much crisper. He has a cooler feeling about the future, shaded by some fears. Although he chose the future as the time zone that most influenced his decision, on the whole Subject C seems to be strongly drawn to the past. Not only does he describe his feelings about the past as warmer, and his images as more appealing, but he admits to his attraction to the far past. "There are certain elements of me that really would have liked to have been born about 500 years ago.

He has a feeling of being out of rhythm with time-clock time, other people's time and his own time earlier in his life. He is aware of a slowing down on his part, "an internal change, an ageing process. . .a stammering in relation to time." He claims that time is occasionally his enemy, but is more often totally disregarded. He claims to lose track of time frequently. It is likely to go too fast, occasionally at a reasonable tempo, or even too slow. So, his time is highly irregular. As a manifestation of his uneasy relationship with clock time, he doesn't wear a watch. He associates the need to be aware of clock time with his responsibilities to others, suggesting he may see clock time as something imposed by society.

Subject C claims not to be religious or spiritual. He practices no spiritual disciplines. He refers to "aesthetic experiences" which are renewing, but he denies their "transcendence". He identifies a "divine fire" with which artists are sparked or informed" and suggests he is not an artist of this kind.

He reports a precognitive experience in the form of a relatively insignificant childhood dream that recurred over several years and later took place. He has had fleeting deja vu experiences, but not for at least ten years. His only other unusual experience involves his losing track of time to the extent that he doesn't know what day of the week it is.

Subject C's view of time is of a rather hostile external force-"a disembodied, disinterested factor in reference to human existence. . .occasionally my enemy." His refusal to wear a watch suggests his rebellion against the restrictions time places upon him. The symbol he chose to represent time was a growing organism such as a tree.

Later he suggested a chain with a linear form made up of interlocking pieces. The notion of a repeating pattern, each time slightly different, suggests a cyclic element to an otherwise linear view of time.

Subject D

Personal Data

Subject D is female, 25 years old and single. She is presently a graduate student, was born in urban Ontario, and is Jewish.

Themes

Expanse of Time

Subject D sees time as beginning at her birth and ending with her death. The beginning of the time line was marked with her "physical birth" and the end with her "physical death". During the interview she declared, "To me time ends after death". In response to the stimulus word immortality she said that immortality has little meaning for her. "I do not believe in the immortality of the soul."

> Her earliest memory is of an event which took place when she was three: I crawled into my brother's crib and watched fireworks in the park, out the window. I can remember the crib, the white rails, eating popcorn. I don't know why I remember it. There were no sounds, no smells. The overall feeling was of contentment. This might have been because it had been my crib and it was good to return to it.

With her earliest memory going back to three years of age, this subject may be considered to have lived with awareness for 22 of her 25 years. She thinks she might not live past 30 years of age. This suggests that Subject D expects her personal time to be short.

Subject D's story in response to the TAT picture was written in the present tense and describes the boy's thoughts. However, since the past of the boy's father is part of the boy's thoughts, the expanse of time of the story may be considered to extend into the past.

Temporal Zones

This subject's TAT story is descriptive of the boy's feelings in the present.

His feelings are shaped by the memory of his dead father who wanted him to play the violin. "Playing the violin is a tribute to his dad and keeps his dad's memory alive." In this story the past is a powerful force in the present.

In response to the Circles Test, Subject D drew three separate circles:

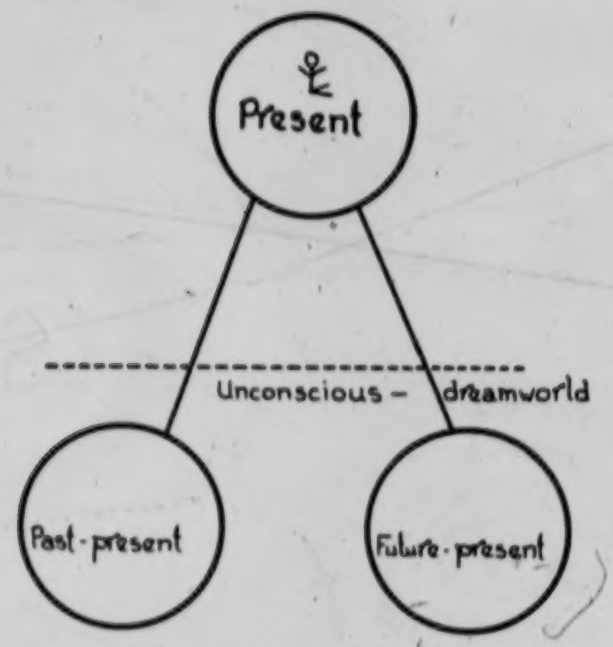

Figure 7. Subject D's Circles Test

All circles are equal in size. The "present" is drawn above a dotted line which represents the boundary between the "conscious" and the "unconscious-dreamworld". A line joins the "present" with both the "past-present" and the "future-present" which are represented below the line, that is, in the unconscious. She located herself in the "present". Although this configuration (atomistic) is considered by Cottle to suggest minimal relatedness among the time zones, Subject D verbalized an interconnectedness among the temporal zones. During the interview she commented:

> Present is always tinged with the past or the future. The present is suspended in the past. The present exists only in the past or the future. . .When I say 'present', it doesn't have anything to do with my present life, just my present experience of the past and of the future.

She mentioned later that her dreams are usually "really future oriented or really past

oriented".

On the Lines Test, Subject D marked the beginning of "time" as her "physical birth" and the end of "time" as her "physical death". Therefore, as she suggested during the interview, all time from her birth to death is "present". Along the length of the time line, this subject has drawn a series of peaks above the line representing "spiritual, intellectual, emotional and psychological births". Below the line is a series of valleys representing "spiritual, intellectual, emotional and psychological deaths".

Figure 8. Subject D's Lines Test

In response to the stimulus words relating to the temporal zones Subject D replied as follows:

Past--Subject D refers to her move to Edmonton as an attempt to move out of her past. "I think my underlying motivation was to break away from the familial trap. . .my father's past has always been a source of guilt for me. I always felt I had to make up to him for what he had lost (family, life meaning, pride, academic success) during the Holocaust. I have always in some way felt hooked to his past. Coming to Edmonton (on some level) was my attempt at breaking with my parents, so that I could live more in the present."

Present--"Although I associate strongly with my past and with my future on an unconscious level, consciously I most strongly associate with the present. I tend to live in the moment and act spontaneously, sometimes impulsively."

Future--"I don't remember ever being extremely future-oriented or making actual plans

for the future. I have had many dreams which seem to connect with events in my immediate future-events which blur the boundary between present and future. Unconsciously I seem to be very much attuned to the future and I am only now beginning to recognize this."

When asked about the feelings she associated with each of the temporal zones, Subject D replied as follows:

Past--"Guilt."

Present--"Neutral, emotionless."

Future--"Right now future is almost that way too, but I guess a lot of times there's anxiety."

When asked to consider an important decision she had made in the past, and to select the temporal zone that was most influential in shaping the choice, Subject D selected the "present". She suggested that more generally when she makes a decision, it is future implications that are most important.

In response to question six, Subject D completed the sentence stems in the following way: "The past is good for equipping me for the future. The present is good for integrating the past. The future is good for giving meaning to the present."

Attitudes to Lived/Clock Time

Subject D volunteered, "I am not consciously aware of time passing." Later she suggests that time is a concept which is imposed as one is socialized.

> I think time is so imposed. I don't think I have ever developed my own conception of time. . .I find myself so limited by how time has been imposed, and how society is regulated by time. I haven't transcended that. . .But I know that a lot of what I've been thinking about in the last few years doesn't fit with what I've accepted. But I haven't taken the time to think about it , or I don't have what it takes to grasp it. It's too abstract. . .I guess for me there is something emotional with time. I seem to have a lot of difficulty speaking emotions. I feel them intensely, but I can't verbalize them, and don't have to. I'm thinking time might be similar.

When Subject D was asked if she felt that her time is different from that of others, she replied, "It's not something I immediately recognize. Sometimes I feel I move faster. I guess it becomes an impatience with others."

In response to the question, "Does time go by at a regular pace for you?" Subject D answered, "I guess when I'm working on a paper it seems like time goes

by really quickly. Generally, I feel I'm not aware of it that much, and I feel it is quite regular." The only time she could think of when it slows down is when she is waiting for something. Subject D is aware of clock time only when she has an appointment. "It's important for me to be there on time. I've tried making schedules for myself and it's never worked. I just have to go ahead and do what I have to do in the time that it takes me."

Attitudes to Death

In response to the stimulus word death Subject D wrote:

> I am unable to reconcile death and have been obsessed with it as of late. I went through a period of time in which I was at peace with both life and death, but recently I have been unable to integrate the two and feel threatened by them. I picture my own death as being early, unnatural and sudden. . .many experiences I have had in the past two years have sensitized me to the capriciousness of death.

This subject does not hold a belief in existence beyond death. "I do not believe in the immortality of the soul. . .death is the end." When asked which statement in question seven is most descriptive of her attitude towards death, she replied, "I think at one point I could have said, 'I've thought about it a great deal, and have come to accept it', but now I'd have to say 'I'm working hard towards accepting it.' and 'I have a fear of it.' ".

Subject D sees death more broadly than simply physical death. It will be recalled that she marked a series of "births" and "deaths" on the Time Line representing (for her) her lifetime. She referred to them as "spiritual, intellectual, emotional and psychological births and deaths".

Religion or Spirituality and Time

Subject D listed her religion as Jewish, but when asked if she considered herself to be religious or spiritual, she replied, "No, not now". Her concept of God comes from her childhood. "I don't think I feel God in me. I feel there is an external God I can communicate with and have prayed to on occasion. But usually only in desperate circumstances. . .I prayed during my childhood, but not now."

Unusual Experiences Associated with Time

Subject D reported having had many unusual experiences related to time. Not only has she had many deja vu experiences, but also has had what she calls a "double

deja vu--a deja vu that I had a deja vu about something. I remember going through the same emotional response as when I first was in the situation." Although she has a neutral emotional response to the deja vu experiences, they are "very intense experiences".

> Like I know for sure they've happened before. And that part of it's really strong. The intensity wipes out the content of the experience itself. I guess I get so excited, knowing that it's a repeated experience, that I don't remember the content. I never think to write them down. I know I've had a number of them.

This subject reported having precognitive experiences, many in the form of dreams. Recently she rewrote a guest list to a party. A few minutes later she had a phone call from someone who had accepted the invitation with enthusiasm, but who was having to cancel. She found that she had left out the guest's name when rewriting the list. "Little things like that I've become more aware of them. I don't just think they're accidental anymore. I'm looking at things like that."

One of her precognitive experiences involved a dream:

> I was travelling to Puerto Rico but it really looked like Spain. . .I walked into a building-it was ominous. I remember the mosaic on a brown coloured building. The feeling I had when I woke up from that dream was that the building symbolized a death, and I didn't feel like I was ready yet. Then when I went to Puerto Rico with my parents, the building was there, just as in the dream, attached to our hotel. I could have gone into it, but I didn't. As soon as I saw it, it jarred me. I knew I had seen it before, and I knew where.

She mentioned other dreams that have predicted an event of the following day. "I've had three within the last six months." An example was dreaming of being called to help someone stuck in an elevator.

> The next morning there was someone stuck in the elevator in the library when I was there. There must have been some connection. I hadn't even been consciously aware of there being an elevator there . . .I have also had little experiences of dreaming about people, and then my mother calling and saying she had seen those people during the period I had been dreaming about them. I think they are interesting.

Another unusual experience related to time happened when this subject was studying for major exams and was short of sleep. She felt herself spiralling through time, inward towards the centre:

> I actually physically was spiralling. I had left my body and was

> spiralling into different dimensions of time. I was somersaulting, and all around me were little flashes from my past. I felt like I was being pulled and I didn't want to go. I wasn't ready. It felt like a death experience. Although I don't believe in life after death, it felt like I was being taken into another dimension. I felt like I was passing by the past, towards the future. I actually screamed out when that happened.

Meaning of Time

In response to the stimulus word time Subject D wrote, "The last few years I feel like I have been in a perpetual dream state. I have experienced so many changes that I have felt 'suspended' in time." The symbol this subject drew to represent time was a spiral moving inward. On this spiral she has written, "a spiralling continuum is representative of time for me. . .As the future becomes the present and then the past, so too does the past become the present and the future". She mentioned the sensation of physically spiralling towards the future while surrounded by the past. On the Lines Test this subject represents the time line as the equivalent of her lifetime.

When asked to define time, Subject D replied:

> I'm so influenced by existing concepts of time that I find it difficult to answer that. I don't feel that the linear concept of time fits for me, but I'm having a hard time breaking out of that-trying to conceptualize life, time, in another dimension. If I were to define time I would probably define it as it is measured.

Later she referred to a "forced, almost communal sense of time, just like religion. It seems that time has been imposed even more successfully. There has been more evidence for it and it has a practical use for everyday living." When asked how she might explain time to someone from another planet she said:

> A pattern in which different events seem to coalesce. . .not just worldly events-any kind of experience, either individual or interpersonal, mutual. We here on earth seem to have defined it in a linear manner-these events seem to unfold linearly. But it's some kind of pattern which is relative.

Summary and Evaluation-Subject D

Subject D may be considered to have a condensed view of time. She equates time with her lifetime. She declared, "To me time ends after death". She doesn't believe in immortality of the soul.

Her earliest memory is of an event taking place when she was three years old.

She may be considered to have lived with awareness for 22 of her 25 years. She expects her personal time to be short, guessing she might not live past 30 years of age.

On the Circles Test, all time zones are the same size, and in an atomistic configuration. Although Cottle says this suggests a minimal relatedness among the temporal zones, Subject D's comments about the past, present and future express an interconnectedness among the time zones. "Present is always tinged with the past or the future." In fact, she states: "The present exists only in the past or the future". Her TAT story, although written in the present tense, is influenced heavily by memories of the past. She locates herself in the present circle and chose the present as the time zone most influential in shaping the decision she considered. However, her extended view of the present must be kept in mind. It is indicated on the Lines Test where all time from her birth to her death is marked off as the present. This suggests that the present fills not only her lifetime, but all time. Her completions of the sentence stems again makes apparent the interconnectedness of the temporal zones. "The past is good for equipping me for the future. The present is good for integrating the past. The future is good for giving meaning to the present. She mentioned that her dreams are "really future oriented or really past oriented".

The dominant influence of the past is suggested by many of Subject D's comments. She admits that she still associates strongly "at an unconscious level" with her past and the past of her family. Her move away from home was a deliberate attempt to break with her past. She says that consciously she most strongly associates with the present. However, she suggests that the past asserts itself powerfully in her present. Apart from some dreams, she says she is not future oriented. She associates guilt with the past and some anxiety with the future. She feels neutral about the present.

Although Subject D says time is a concept imposed on us from the outside and that we are socialized to accept it, she also has a sense that there is more to time. There is some emotional aspect about which it is difficult for her to speak. Her experience of time moving faster than that of people around her makes her impatient with others. She reports that generally time is quite regular, but at times it changes pace. When writing it goes by quickly; when waiting it slows down. She is only aware of clock time when she has an appointment. She has tried making schedules but they never work. "I just have to go ahead and do what I have to do in the time that it takes me." This seems a suitable way of maintaining control in the face of an imposed concept, one which she sees as "an attempt to put every human being on the same plane--a

forced attempt at making sense of the world".

Subject D has given death a lot of thought. In fact, she admits to having been "obsessed" with it lately. She is unable to integrate life and death, and feels threatened by them both. She is sensitive to the capriciousness of death and expects to die young and suddenly. For her, death is final. She definitely has confronted her own mortality and is working towards accepting it. She is fearful about her death. Her interpretation of death is broader than just her physical death. She indicates a series of "births and deaths" on the line representing her lifetime. The represented "spiritual, intellectual, emotional and psychological births and deaths". So, in spite of her claim not to have integrated life and death, she has attempted to reconcile the two. She has personal experience struggling with death.

Subject D claims not to be religious or spiritual, although she has a concept of God. It is an external God that comes from her childhood. "I don't think I feel God in me."

She reported many unusual experiences related to time. She has had frequent deja vu experiences and even what she refers to as a "double deja vu". These are very intense experiences and the intensity "wipes out the content of the experience itself". She also reported numerous precognitive experiences, many in the form of dreams. Another unusual experience involved the feeling of "spiralling through time, inward towards the centre-passing by the past, towards the future. . .it was like a death experience". She felt like she was being taken into another dimension. This description suggests an interconnection among time, movement and space.

She further suggests spatiality when reporting that over the past few years she has felt "suspended in time". The symbol she drew to represent time, "a spiralling continuum moving inward", is reminiscent of the experience just described.

Subject D had difficulty defining time because she feels a forced, almost communal sense of time has been imposed so successfully. Although this linear concept of time doesn't fit for her, she has a hard time breaking out of it. Apart from defining time as it is measured, she suggests it is "a pattern in which different events seem to coalesce".

Subject E

Personal Data

Subject E is male, 70 years of age, divorced and has two grown children. He

is a retired consultant possessing a Bachelor's degree in Sociology. He was born in rural Ontario, and lists his religion as Presbyterian.

Themes

Expanse of Time

Subject E's TAT story is a narration of the thoughts of the boy, spanning a very short time. However, the future musings of the boy extend the time span of the story into the future.

Subject E marked the beginning of the time line with his birth and the end with his death. This subject holds a belief in a future beyond death, in spite of his admission, "I don't think we know. . . it's speculation." He feels excited by the images he has grasped of a "greater fulfillment" beyond life. He looks forward to an "understanding with more depth of what we have learned". This subject has also considered the possibility of previous existences. He has worked with a therapist who helps clients explore past lives. Subject E became aware of several images which held symbolic meaning for him. However, "I never really felt that anything I did in his workshop was a past life thing. . .it felt more like a metaphor for this lifetime."

Subject E's earliest memory is of himself at "crawling age" (one year or so). He has other preverbal memories, such as, "an impression of adults shouting, arguing, and my hiding under a table, peeking up in a frightened way". He described a vivid memory of when he was five. "I am walking along a boardwalk, waving a flag. It's an armistice parade. There were many people, other children, all laughing. There was a great feeling of relief in the air, news had burst on us that the war was over." With memories reaching back to his first or second year, Subject E may be considered to have been aware for 68 or 69 of his 70 years. He expects to live until he is about 80 years of age.

When asked if time has a beginning and an end, this subject differentiated between two ways of conceptualizing time, the linear and the cyclical. "If you are in the linear state of time, yes, it ends. If you're in a cyclical state, no, it doesn't." Since he says he is moving more towards the cyclical concept of time, he believes more and more that time doesn't "begin or end".

Temporal Zones

This subject's TAT story, although written in the present tense, contains

musings and aspirations about the future. He "hears" the potential in the violin, and after speculating about whether he could do it expresses his determination to learn to play. The future plays an important role in his "present" thoughts.

In response to the Circles Test, Subject E drew three overlapping circles:

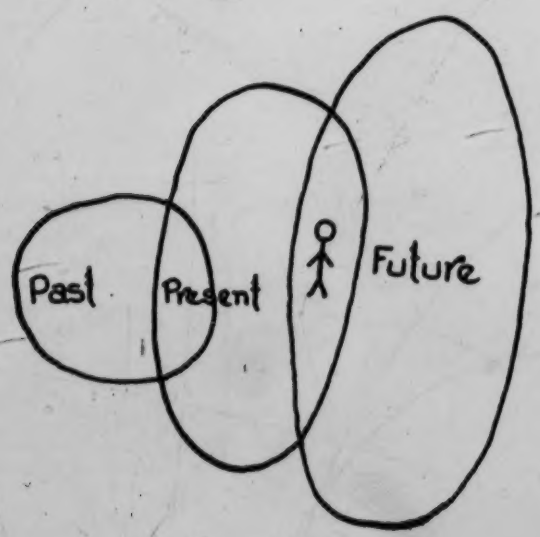

Figure 9. Subject E's Circles Test

The "past" is the smallest and circular. The "present" is much larger and an elongated circle. The "future" is larger still and oblong. Subject E located himself in the overlap between the "present" and the "future". In terms of time zones relatedness, Cottle labels this configuration "integrated". Because of the increasing sizes of the circles from past to future, this configuration would be referred to as "future dominant temporal development" in Cottle's terminology.

On the Lines Test, Subject E marked the beginning of the time line as his birth and the end as his death. He drew an arc joining his birth and death. This represents the boundaries of the present. Therefore, all time is equated with his lifetime. As well, his whole lifetime is experienced as "present".

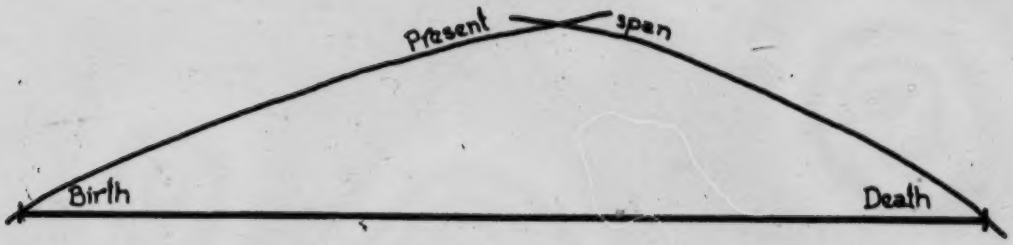

Figure 10. Subject E's Lines Test

In response to the stimulus words relating to the temporal zones Subject E replied as follows:

Past--"It's over-feelings that I would do many things differently now. . . but it's gone, so (I must) live more meaningfully now. For example, I regret how I related to my daughters as they grew, but recognize I did the best I knew how to then, and the important thing is to relate to them and others creatively and constructively now."

Present--"This is all I have. Living in the now is a constant challenge to me. I have feelings of richness as I relate to the present."

Future--"Mostly feelings of excitement. However, these are mixed with periodic apprehensions because living fully now means taking risks, accepting challenges. Mostly however, is a confidence that I will have the resources to deal with the future as I move into it, especially as I make the most of the now."

When asked what feelings or emotional response he had when he thought of each of the temporal zones, Subject E replied:

Past--"There are a lot of regrets, but when the harsh feelings start to come up, then I throw myself back into the present and say, 'I did the best I could; what I do now is important'."

Present--"This is rich. This is exciting. This is meaningful."

Future--"It's becoming more interesting and exciting."

When asked to consider an important decision he had made in the past and to select the temporal zone that was most influential in shaping the choice, Subject E replied that he mainly considered whether his choice was relevant to the present circumstances.

In response to question six, Subject E completed the sentence stems in the following way: "The past is good for learning. The present is good for being. The future is good for stimulation."

Attitudes to Lived/Clock Time

Subject E described a shift in his experience of time which he connects with a life-threatening event. "There's a change from time in a linear sense to time in a cyclical sense." He feels that we in the Western world are programmed into a linear view of time. He suggests the possibility that we have developed this way of looking at time "because we have lived in the past or the future and not much in the present". This causes time to get pulled out in two directions, making it feel like a line. Subject E feels it is important to live as much as possible in the present. He associates the change in his attitude towards time with "the beginning of awareness of responsibility for time-how I used it. It became more valuable. Instead of one damn thing after another, I had a sense of taking charge of my life."

When asked if time goes by at a regular pace, Subject E replied that the concepts of "pace", "slowly" and "quickly" don't fit with his view of time. The distinction he would make now would be between "richness and banality", "intensity and lack of intensity", and "active and passive". He adds that "richness" of time experienced can apply to both time filled with activities and time in which there are fewer activities. "A day when there is not a great deal of structure and not many activities, and I don't get much done, that also can be quite a rich day."

When asked if he has ever experienced his time as different from others around him, Subject E replied: "I would say 'yes'. I can't think of instances. But the phrase 'marching to the beat of a different drummer' has periodically helped me."

Attitudes to Death

In response to the stimulus word death Subject E wrote:

> Mixed and somewhat opposite and conflicting reactions, like 'the end' and 'the beginning', 'conclusion' and 'new opportunities'. Feeling the finality as I struggled with a young sheep crushed in the chute. Feeling the hope as I experience Christ's resurrection.

It is clear that Subject E entertains the possibility of multiple existences, and presumably existence beyond his death, because of his participation in a workshop on "past lives". When asked what he thinks follows death, Subject E replied, "I don't think we know. It's speculation. But the images (in the literature on life after death) are exciting, and have to do with greater fulfillment." He agrees with a Jungian writer who suggests that when we die we take with us all that we know at that point. "So

there is an excitement about knowing as much as you can to take into-that future, the continuation. Apparently what comes after will be the application of what we know, understanding with more depth what we have learned."

Subject E referred to two events in his life that felt like "death experiences". "It's not different from the Christian experience of dying and being raised. And I had something like that as a teenager." More recently he was unconscious for five days and awoke with a physical feeling that "things had become new".

This subject's thoughts about his age at his death have changed. My original scripting was 58. I think that was because my father died at 58. When I got past that, I had to choose a new age. I chose 80. I think I would leave it at that."

Religion and Spirituality and Time

Subject E listed his religion as Presbyterian. However, he sees himself as spiritual but not religious. "I always felt that religion, thinking of it in terms of man striving to reach God, is the enemy of spirituality which is God reaching to man." When asked if he meditates, prays or otherwise communicates with God, Subject E replied that he meditates "pretty regularly". The nature of his meditation has changed lately. "Up until recently the meditation has been more of an exercise for centreing and quieting myself. More recently it's been a way to open myself to any divine message." He indicated that "there are times when time seems to stand still when meditating".

Unusual Experiences Associated with Time

Subject E also associates the standing still of time with the change from a linear to a cyclical sense of time that happened for him a few years ago. He links this standing still or absence of time with "the richness of the moment". "It's like you move into another state of consciousness briefly. There's a different energy; a high, high energy." This subject referred to his first experience of this altered sense of time: "It was like there was a vertical line as well as a horizontal line, like eternity coming into and intersecting whatever this moment is." In reference to time standing still when he is meditating, Subject E says that afterwards "a long period seems to have been only a moment".

Subject E was unable to recall ever having a precognitive experience. When asked if he has had a deja vu experience, he replied: "Yes, I think so but I can't tell you any time".

Meaning of Time

In response to the stimulus word time Subject E wrote:

> I like the old clocks with circular faces. Each moment is like that, versus a linear conception of time. Time is paradoxical; each moment is an eternity yet each goes by very quickly. I feel good about this moment. . .Time is rich. It is now. It is here. It is a framework in which I live and act.

When asked, "What symbol or metaphor is representative of time for you?", Subject E drew the round face of a clock marked with the hours from one to twelve, but without hands. When asked how he would define time Subject E replied, "I don't know. I used to have a definition when I taught workshops on time competency. I'd have to take that old definition which is artificial." He feels that "the artificial construct" of time is taught in our culture and that we use it until we don't need it anymore.

Summary and Evaluation-Subject E

Subject E, in a manner similar to the previous subject, equated his lifetime with time by marking his birth at the beginning of the line representing time and his death at the end. However, this subject speculates that there is a future beyond death. He also considers the possibility of existences previous to this lifetime. So, his view of personal time in fact does extend beyond his lifetime.

His earliest memory is of himself at about a year of age, so he may be considered to have lived with awareness for 68 or 69 of his 70 years. He expects to live until he is 80.

He drew an integrated configuration of temporal zone circles suggesting a strong relatedness among the past, present and future. The circles increase in size from the past to the future. This "future dominated temporal development" suggests the future is the most important and the past the least important of the temporal zones to this subject. Although his TAT story was written in the present tense, the boy's musings about his future extend the time span of the story into the future. In apparent contradiction to this emphasis on the future, he has represented the whole time from birth to death on the Lines Test time line as "present". Subject E's comments in

general suggest an emphasis on the present and the future, and a disregard for the past. He expresses some regrets about the past. He believes he can learn from the past and, in fact, alter his past by changing his behaviour and attitudes in the present. About the present he says it is all he has. It is a constant challenge to him to live in the "now". He feels it is rich, exciting and meaningful and is good for "being". In making an important decision it was "relevance to present circumstances" that was most influential on his choice.

Subject E spoke even more positively about the future. He described feelings of excitement and interest. These are mixed with periodic apprehensions, "because living fully in the now means taking risks, accepting challenges". He plans to continue changing and growing as he moves into the future. His suggestion that the future is good for stimulation demonstrates its impact on him.

He differentiated between a linear and cyclical conceptualization of time, both of which he holds. When he thinks of time linearly, it has an ending; when he thinks of it cyclically, it doesn't have an ending. He is moving towards a cyclical concept, so believes increasingly that time doesn't begin and end. Subject E connects the shift from a linear to a cyclical conceptualization with a life threatening event a few years ago. He feels that in the Western world we are programmed into a linear view of time. He suggests this comes about because of our habit of living in the past or the future and not much in the present. This causes time to get pulled out in two direction, making it feel like a line. When his life was threatened, he became aware of his responsibility for how he used his time. "It became more valuable. . .I had a sense of taking charge of my life."

He doesn't associate the concept of "pace" with his view of time. He distinguishes between richness and banality, intensity and lack of intensity and between active and passive time. He said he has experienced his time as different from those around him, although he couldn't think of an example.

Subject E described conflicting reactions to his own death, such as, "finality and hope". He speculates that what follows death involves greater fulfillment. He described two "death experiences" he has had that compare to the Christian experience of dying and being raised-one as a teenager, and one more recently. Each involved a feeling of things having become new. He has certainly given much thought to the subject of death and of death within life.

He claims to be spiritual but not religious. He views religion, which he defines as man striving to reach God, as the enemy of spirituality, which he sees as

God reaching to man. He meditates "pretty regularly" with the purpose of opening himself to any divine message. At times when meditating, time seems to stand still. Afterwards a long period seems to have been only a moment.

This same standing still of time seems to be related to the shift from a linear to a cyclical sense of time. He associates the standing still or absence of time with "the richness of the moment". It feels like a move to another state of consciousness, a different, higher energy. He likens it to a vertical line intersecting a horizontal line, like eternity intersecting the moment. Subject E has experienced time at a deep level.

He doesn't recall any precognitive experiences. He thinks he has had a deja vu experience, but couldn't recall a specific instance.

Subject E symbolizes time by an old clock with a circular face and no hands. He identifies a paradox in relation to time, "each moment is an eternity, yet each goes by very quickly". He calls time "the framework in which I live and act". He also feels that the "artificial construct" of time is taught in our culture and that "we use it until we don't need it anymore.

Subject F

Personal Data

Subject F is female, 60 years old, married and has one child. She works as a teacher and librarian and possesses a Bachelor of Education degree. She was born in a town in Ontario and declares her religion to be Protestant.

Themes

Expanse of Time

Subject F does not expect her personal time to extend beyond her physical death. She indicated her lifetime (the time between her birth and "final" death) to be about the middle one quarter of the line representing time on the Lines Test (4 cm of the 15 cm line). When asked if time has a beginning and an end, she replied:

> The way of thinking we have adopted leads you to think "What came before that and before that". But somewhere it gets very blurry and nobody knows and it always will be like that. There must have been times when everything was wiped out and then it started again.

Subject F's earliest memory is of going on the train to her grandfather's funeral when she was six. Sensory detail is vivid in her memory, for example, the appearance of the high-backed seats, the taste of the hard boiled eggs they had for lunch:

> It was one of the few occasions I was alone with my mother. We went to a farm. The house was very large, with a front and a back stairs. You could go around. Coming down the stairs you could see into the parlour where my grandfather's coffin was. I would sit on the stairs and look in. The memory is filled with pleasure, sheer joy. I wanted more funerals in the family. Grandfather was a dreadful old man.

She said she has some earlier memories, but suspects they may have their basis in photographs. With her memory going back to the age of six, this subject may be considered to have lived with awareness for 54 of her 60 years. When asked if she has thought about the age at which she might die, she replied, "No. I have no idea whether my final death will be far away or close."

The action in Subject F's TAT story covers about six years. However, the memories and the future projections described cover three generations.

Temporal Zones

This subject's TAT story, although written mainly in the present tense, is strongly flavoured by the past, and to a lesser extent by the future. The story is about an eight year old boy being given the violin that had belonged to his dead father:

> It was the first time Cal had seen the violin but as far back as he could remember it had been a part of his birthday celebrations. . .Then his grandmother or one of his aunts or uncles would always exclaim, "Oh how your father loved that violin! He could fairly make it dance, he could". . ."I'll never touch it! Never! That's my father's violin and no one must ever play it but him." And no one ever did.

The powerful influence of the past on the present and on the future is clear in the story.

In response to the Circles Test Subject F drew three somewhat irregular concentric circles:

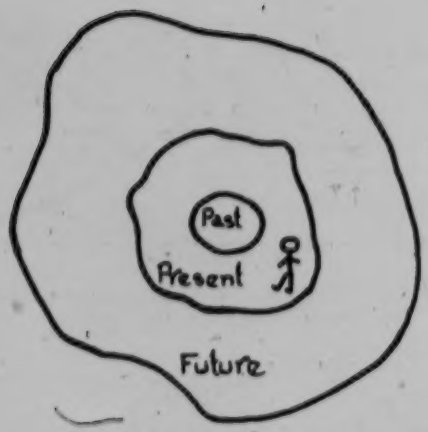

Figure 11. Subject F's Circles Test

At the centre is a small circle representing the past. It is surrounded by the larger "present", which is in turn enclosed by the much larger "future". She located herself on the outer perimeter of the "present" near the boundary of the "future". Cottle would refer to this increase in circle sizes from past to future as future dominated temporal development. The configuration of circles is called "projected" by Cottle and represents the extreme in relatedness among the temporal zones. Subject F verbalized the inseparability of the time zones: "Always in the present you are experiencing your past and you are looking forward to something in the future."

On the Lines Test Subject F represented the present as a bubble floating above the time line, but intersecting the line at a single point:

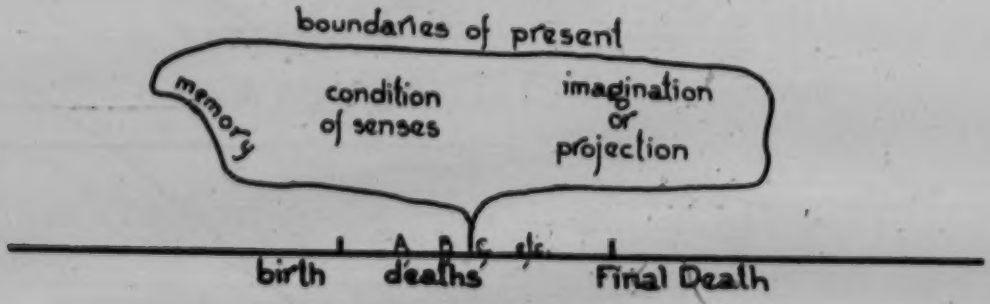

Figure 12. Subject F's Lines Test

> The boundary of the present is going to be very flexible, depending on the condition of your senses. When your senses are more acute the present expands. That's when the shattering of illusions comes-when you're experiencing something quite strong. You learn something; your awareness is raised.

Within the bubble representing the present are the words "memory" and "imagination or projection". Again she is expressing the inseparability of the temporal zones. Memories are representations of the past, and projections or imagination representations of the future. Both are elements of the present. Subject F suggests that the boundaries of the present are also expanded by the inclusion of memories (of the past) and projections (into the future) in the present.

> Your present can come down to a pretty small point. Sometimes you are completely oblivious to almost anything outside yourself. Other times it takes in everything. You are really alive when you're envisaging your future and at the same time remembering.

She also referred to the ease with which the past comes to her. "The past all just comes back. It's there. It's part of you at any given moment."

In response to the stimulus words relating to the temporal zones Subject F replied as follows:

Past--"I must not let it have a hold on me. I believe the study of history is important to give us an accurate perspective on our own times, but we may not take either credit or blame for anything that happened in the past."

Present--" 'The Eternal Now'. . .I once wrote a poem with that title. It ended thus:

> If then I turn my back on Truth
> To live a lie
> I am a fool
> For I have wasted all the time I have,
> The Eternal Now,
> On hopeless vanity.

I guess I still believe that."

Future--"An eternity of possibilities! I'm glad the future never comes. I prefer Christmas Eve to Christmas; I prefer the journey to arriving."

When asked about the feelings she associated with each of the temporal zones, Subject F replied as follows:

Past--"It changes of course. Lots of times I have a feeling of sadness. The sadness is that you don't understand until it is the past. When it is present you don't understand what is happening. If you had understood you would have done something different. Or at least you would have been aware and saved yourself a lot of the fear and

uncertainty and suffering. And yet the past also has very happy, wonderful memories of 'child', free and enjoying life-secure in a good happy family. So that the one was sort of laid on top of the other."

Present--"Very satisfactory. I can't remember a time in my life when I've been so happy just to be in the present. I don't care about the past. It seems to have lost its hold on me. I'm not looking forward to anything particularly. Peaceful. Sometimes it's dull, but peaceful. I really think you have to be going through something which is unnerving or at least upsetting in a way to really feel that aliveness. But now I'm just drifting along, as if I'm on a cloud. It's kind of lovely. I know it's going to end soon."

Future--"It's really good. The future looks full of possibilities I want to have happen. . .I try not to have any expectations. I know the pain of not having expectations work out. Life in general-you don't know what's going to happen."

When asked to consider an important decision she had made in the past, and to select the temporal zone that was most influential in shaping the choice, Subject F selected the "present". "What was right at the time."

In response to question six, Subject F completed the sentence stems in the following way: "The past is good for anecdotes-you can always pull out a good story. The present is good for being alive-just living as much as you can. The future is good for dreaming."

Attitudes to Lived/Clock Time

Subject F said that a linear view of time is natural for her:

> That linear thing is very strong with me. I expect all of us who are educated and who read have been taught that it's 'one thing after another', first this, then this. I know it isn't like that, but that's the way I think about it a lot. . .The other way I have of describing time is with all three dimensions (past, present, future) being there together all the time, often in different amounts, different intensities.

When asked if time goes by at a regular pace, Subject F replied:

> No, it changes, dramatically. When you are enduring something, and you can't see how the change is going to come about, time just drags. . .When you are in a condition that you want to be in time speeds up. I think that's being on the journey. I love to be on the journey, moving. I don't particularly want to arrive. When you see that hope, and you know you're going to get there, oh, a wonderful sense of surging forward!

When asked if she ever felt that her time was different from that of others,

Subject F replied that the "progression in time that society is following" is not one she will share. "I will try, deliberately, to get out of step with what we call 'progress'. I don't want to be a part of it." She also reported a difference between her time and that of the children she teaches. "They are on a different time length than I am. They are very much in the present and future. They haven't got any past and so you have to appeal to them in a different way."

Subject F referred to the illusory nature of time. "It's an illusion, an incredibly strong illusion. All we have to go by is our life, so we use that. It's not clear to me what the illusion is, just that there is no such thing as what we call time-the clock ticking away."

Attitudes to Death

In response to the stimulus word death Subject F wrote:

> Death is both angel and demon-two faces of the same reality. Something has to die in order that we may have life. Recognition of the basic nature of existence (life-death-resurrection) is necessary for sanity, growth, health, maturity. . .I have been tempted by death in life, tempted to ally my will to those dark forces that had caused the (disease process) in the first place. But by great good fortune I was shown the direction I was taking and was helped to a decision to turn away from self-pity and dwelling in the past and to face towards healing and life.

Subject F does not hold a belief in existence beyond death. "I don't think anything about me will continue after death except in the sense of atoms being recycled." When asked about her attitude towards death, she said she accepted it. "I know it has to happen, so, 'so be it'. But I'm also a little curious about it. I think if I have any idea of death at all, it is rather like going under an anaesthetic. Consciousness will be blocked out and that's it." She hasn't considered the age at which she might die, but "I hope I don't reach a great age. I don't want to go through a long illness."

This subject also referred to death in life. "The death in life is when you're dying, but you are still alive. That's not good." On the Lines Test she indicated several such "deaths" before her "final" death.

Religion or Spirituality and Time

When asked if she considered herself to be religious or spiritual, Subject F

replied, "Yes. But lately something strange has been happening to me in that I honestly don't know anymore. . .The church has lost its relevancy. . .I feel disloyal. It's been such a big part of my life." She is clearly struggling with her commitment to organized religion. "I don't want to go to church, read the bible, or pray, or talk about religion. I find myself getting irritable and I don't want that." She is also re-examining her belief in God:

> My belief in God is gone-completely. Or what I have called God. My belief in God has always been that there is something that we cannot comprehend. Well, that's only a matter of degree or of time. We will comprehend. We have already done that. . .I don't believe that there is anything supernatural-only natural. I think that where we are in need of religion perhaps is that man is inherently unable to do anything except destroy himself with the knowledge that is being gained. . .If I express God in any way I say God is just whatever is true or real. And I don't know how many illusions you have to get through before you get to reality. The computer gets through layers of reality where we used to not know. So God had a place. Now you can find out. And yet when you know all that you don't know anything. What you get is information. Wisdom isn't there.

Subject F considers herself a spiritual person in spite of her current confusion and ambivalence about religion. She meditates regularly and wants to find a further expression of her spirituality in commitment to the peace movement. She also admits, "When I wake up in the morning I instinctively pray. So, I'm not going to stray very far from it. . .I have to stop caring about the theology."

Unusual Experiences Associated with Time

Subject F said, "I don't think I've ever had any precognitive or psychic experiences. That's a regret I have. And I don't want to do anything to make that happen, like taking a drug. I want it to happen naturally." Some "interesting" things have come out of her meditations. "Sometimes they will give me a good feeling, an uplift. Some are beautiful. Some reflected my mood when I was blocked. But I don't think that's psychic."

She also couldn't remember having any deja vu experiences. This subject has, however, experienced new truths in a way that feels like the present and past come together. "You can say, 'That was always true, and yet I wasn't aware of it'. You suddenly see things you have experienced in the past in a different way."

Meaning of Time

Subject F didn't respond to the stimulus word time. The symbol or metaphor she offered to represent time was, "A wave which gives the illusion of movement but the individual particles move very little. Or an "inflatable", all lumpy and bumpy, of no particular shape." During the interview she volunteered, "Time gives the illusion of change, but much remains the same." She emphasized the point that time is an illusion. When asked to define time she said:

> Time is a system of measuring happenings and of keeping control over things. That's the greatest part of the illusion, the control it gives us. We like time measurers. We love clocks and watches because they give us the illusion of having control over what is happening to us. And we don't have any control really.

Summary and Evaluation-Subject F

Subject F indicated her lifetime to be about one quarter of the line representing time. This suggests she sees universal time as extending beyond her personal time. She doesn't expect her personal time to go beyond her death. She has no idea whether her "final" death will be far away or close. Her comment, "There must have been times when everything was wiped out and then started again", suggests she thinks of time in terms of beginning and ending.

Although she has earlier memories that she suspects may have their basis in photographs, she described a vivid memory from six years of age. She may be considered to have lived with awareness for at least 54 of her 60 years. The action of her TAT story covered about six years but the memories and future projections span three generations. This represents a very extended time span, suggesting she thinks of time expansively.

On the Circles Test, Subject F drew irregular concentric circles increasing in size from the one representing the past to the one representing the future. She locates herself on the outer perimeter of the "present", near the boundary of the future. Cottle calls this size relationship of circles future dominant temporal development. He says this suggests the relative importance of the future to this subject. However, this was not confirmed by her verbal comments about the importance of the past and the present. The configuration of circles she used Cottle refers to as "projected". It represents the extreme in relatedness among the temporal zones. This inseparability of the time zones was verbalized by the subject, "Always in the present you are experiencing your past and you are looking forward to something in the future". She

represents the present on the Lines Test as a bubble floating above the time line and intersecting it at a single point. She considers the boundary of the present to be very flexible. She says that "memory" and "imagination or projection" are parts of the present and that they "expand" the present. Again she is expressing the inseparability of the temporal zones. In fact, she suggests that you are really alive when you are envisaging your future and at the same time remembering, in the present. As if to exemplify this, her TAT story is written in the present tense but flavoured powerfully by the past and to a lesser extent the future.

She refers to the ease with which the past comes back to her and comments, "I must not let it have a hold on me". Her feelings about the past range from sadness, fear, uncertainty and suffering to happiness as she reflects on her childhood. She refers to the present as "all the time I have", suggesting its importance to her. She feels happy to be in the present. It is satisfactory and peaceful, although sometimes dull, like drifting on a cloud. The future is an eternity of possibilities. She tries not to have any expectations because it is painful if they don't work out. She suggests that we never know what is going to happen in the future. Her comment that she is "glad the future never comes" suggests she isn't attracted to the future as much as she is to the present. Although she fights its hold on her, the past is a powerful force in her life.

She says her time is different from that of others because she refuses to share the "progression in time" that society is following. "I will try, deliberately, to get out of step with what we call progress." She also notes that her time is different from that of the children she teaches. "They are very much in the present and future. They haven't got any past." She also refers to time as an incredibly strong illusion. "There is no such thing as what we call time-the clock ticking away."

Subject F sees death as having two faces: that of an angel and of a demon. She sees death as a part of life. "Recognition of the basic nature of existence (life-death-resurrection) is necessary for sanity, growth, health, maturity." She also mentions having been tempted by "death in life" in the form of an illness, and having made the decision to face towards healing and life. She sees death as final. Only her "atoms" will be recycled. She says she accepts death and is also a little curious about it. On the lines Test she indicated several "deaths" during her lifetime. "Death in life is when you're dying, but you are still alive. That's not good." Clearly she sees death as a part of life and as having destructive or constructive potential.

She claims to be religious and spiritual, although the church has lost its

relevancy. She is confused and ambivalent about her commitment to organized religion. At the same time she is re-examining her belief in God. She meditates regularly and prays instinctively when she awakens.

She regrets never having had any precognitive, or what she calls "psychic", experiences. Some "interesting" things have come out of her meditations, making her feel uplifted. However, she doesn't consider them unusual. Although she doesn't remember having any deja vu experiences, she has experienced new truths in a way that feels like the present and past coming together.

Subject F thinks about time in two different ways. A linear view of time is natural for her. She feels this is the way we have been educated to think of it. The other way she has of describing time is with all three dimensions (past, present and future) being there together all the time, often in different intensities. Time changes dramatically in pace for her in the commonly described manner: when she is enduring something unpleasant time drags; when she is in a condition that she wants to be in time speeds up.

The symbol she offered to represent time was "a wave which gives the illusion of movement but the individual particles move very little." She suggests in reference to this symbol that time gives the illusion of change but much remains the same. She defines time as a system of measuring happenings and of keeping control over things. "We love clocks because they give us the illusion of having control over what is happening to us. And we don't have any control really."

Subject G

Personal Data

Subject G is female, 48 years of age and married with two children. She is a Nurse/Psychologist by profession and has completed a Masters degree in Education. She was born in Ontario and says her religion is "nominal Baptist-Christian at least".

Themes

Expanse of Time

Subject G marked her birth one centimetre from the beginning of the time line

and her death one centimetre from the end. This would suggest that she sees her personal time (her lifetime) as occupying most of "time". However, she wrote a note below which reads: "I would like to draw another line representing time. My own life would appear as a dot. I am becoming more conscious of Time Immemorial, the foreverness of time." She has a belief that she will continue on after her own death. In response to the stimulus word immortality Subject G wrote, "Yes-a going on to. . . I'm not sure what."

When asked if time has a beginning or an end, this subject replied:

> I was brought up with the notion of Eternity. I can't envisage something without a beginning and an end, because everything always has, in my experience. And yet, when I take that leap of faith or whatever, it seems that (Eternity) could be possible. It seems that we only think of time as having a beginning and end because we need it, here. I have a feeling that when we "step over" or whatever, that time won't be a problem, or an entity. It will become something that we have left behind. It's something of this world. So there are beginnings and endings here for sure. But I have a sense it won't even be relevant at all before birth and after death. I think we are just sort of plunged into time and then relieved of it.

Subject G estimated that she will live until 78 years of age. This means she sees herself as having 30 years left. She remembers clearly events which took place when she was three or four years old. She also recalls an earlier scene--being given a bath by her sister when the minister came to visit. "He came into the room. I remember being mortified. . .feeling exposed. I remember him pretending he was playing 'peek-a-boo'. I was highly indignant." She guesses she must have been "very young" to be bathed by her sister and for her "rather prudish family" to allow her to be seen naked. If this event occurred when she was two or three, she may be considered to have lived with awareness for for 45 or 46 of her 48 years.

The time spanned by Subject G's TAT story is very short. She describes it as taking place in the "here and now, a matter of minutes".

Temporal Zones

Subject G's TAT story was written in the present tense. It involves the thoughts of the boy as he decides between playing the violin and going outside to play with his friends. He has been told he has the hands of a great violinist. His choice to practise the violin may reflect an orientation to the future on the part of this subject.

In response to the Circles Test, subject G drew three separate circles as represented in Figure 13.

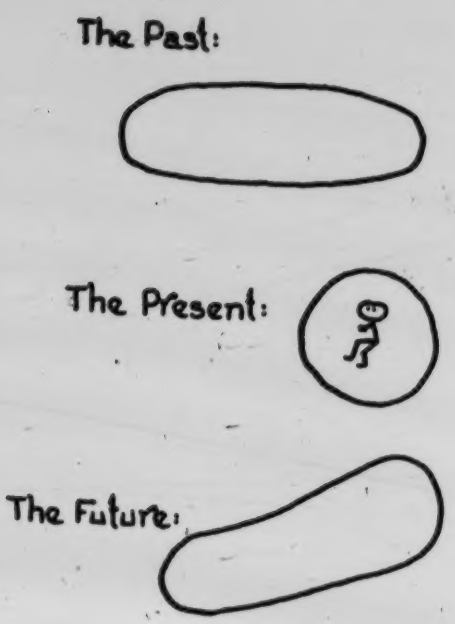

Figure 13. Subject G's Circles Test

Although the circles are approximately the same size, they are of different shapes. The present is almost circular, the past and future are elongated, and the future slants upwards. Cottle refers to this temporal relatedness design as "atomistic". It suggests minimal relatedness among the time zones. Because of the approximate equality in circle sizes, no temporal zone was judged to be dominant. She locates herself in the "present" circle, suggesting its importance to her.

On the Lines Test, Subject G represented the present as a 2.5 cm portion of the 13 cm she used to symbolize her lifetime. This "present" zone begins 6 cm from her "birth" and 4 cm from her "death". This is a very realistic representation of her lifetime, if her estimated age at death is accurate.

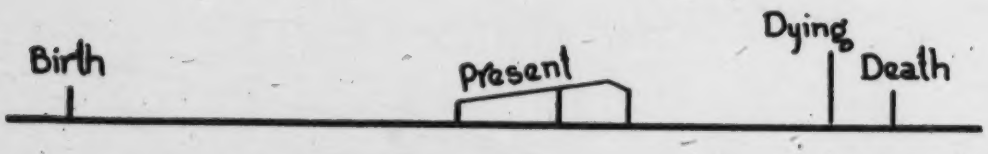

Figure 14. Subject G's Lines Test

Subject G did not respond to the stimulus words relating to the temporal zones. When asked about the feelings she associated with each of the temporal zones, she said she preferred to start with the present. "That says something in itself," she commented.

Present--"I do tend to spend most of my thoughts and my feeling in the present. They seem to be daily, minute-by-minute things. . . .The present is a time of transition. Because of (a career disappointment), I've had to do some re-adjusting. . .Maybe I haven't really finished all there was for me where I am, as opposed to always lunging off into the future, and always trying to catch my past up to my future."

Past--"I find I use the past, and reflect upon the past, and am probably more trapped by the past than I realize, by my upbringing and my family. My feelings are mixed--some amusement, I suppose. I'm very fond of the little girl who was."

Future--"Well, Pollyanna (her name)! But things are a little more unsettled than I'm used to. I thought, 'I'm going to have some security here', but, not so!"

When asked to consider an important decision she had made in the past and to select the temporal zone that was most influential in shaping the choice, Subject G said that all three had been considered.

> I suppose in a sense it was forward looking, thinking "this is the time. . .to move on". I had given what I could give, learned what I could learn. It seemed as though it was an inevitable thing. I also looked back (to an earlier similar decision) and thought, "I had that same feeling before, and it was right so likely this is right again."

Subject G suggested that the present was most influential, the future the second most influential and the past was also considered. However, it is possible that she had a strong sense of "rightness" in the present as a result of a clear vision of what she now wanted to move toward in the future. "I had a feeling of marking time; I wanted to stride again. That's what I seem to feel best at--when I have my stride, as opposed to marking time. I stand on the past, I suppose."

In response to question six, Subject G completed the sentence stems in the following way: "The past is good for a foundation for basing one's future and present on. The present is good for feeling it, living it, enjoying it, 'Smelling the roses.' The future is good for dreams, hope." She went on to comment on the importance of hope and less directly, the future:

> You know the old saying "Where there's life there's hope"? It came to my mind, "Where there's hope there's life". It's when we're

> without hope that nothing is possible. That's what happens when we get temporary rejections. I tend to feel, "Damn, no hope!" The dream gets scrunched up for a time. But soon one can feel that dream coming to the surface again, that hope bubbling up. It's just that you're off the path somehow. So, the future is for hope.

Attitudes to Lived/Clock Time

In response to the question asking for a metaphor or symbol representative of time, Subject G wrote:

> A lovely gift-an as yet unidentified substance that I can not yet define, but I can describe. Quality-like warm plasticine-squashable, stretchable, shapable within boundaries of its basic essence over which I have no control. Colours-I have them all-sometimes one colour is important, sometimes another. I am moving from soft Wedgewood blue to indigo blue and purple. Purpose-to play with-although it often feels like hard work and no fun at all. Amount-I'm not sure. I reach in the box and am still finding more. But it is not limitless, at least this kind of time is not.

In spite of her vivid metaphor, Subject G claims to be "out of touch with time". "In fact, I'm not very often conscious of time. . .I just kind of move along through it." This seems consistent with the "transition" she describes herself as being in at present:

> I don't get the sense of being pushed or pulled or having to scramble over the rocks anymore. It is more like 'time out' now. Relax and retreat and enjoy the fruits of the struggle. So I don't have the same sense of urgency just now that I still think I ought to. I'm not getting a message that I'm to struggle for the time being. I'm to relax for a little while.

When asked if time goes by at a regular pace, Subject G replied:

> I don't know what a 60 second minute feels like. I guess I don't think about it when it's going on at "normal". . .No, time won't behave. It sort of lunges and leaps. And drags. I very seldom have any sense of its being under control, orderly. If I'm waiting for an appointment, particularly something I'm dreading, it tends to drag-360 second minutes! And, (the old cliche), if it's something I'm interested in, then time just goes by really fast. Quite often it's doing that-stretching and shrinking. If I'm into something I'm enjoying, that takes precedence over the time.

In spite of her expressed wish to "let time be, to let whatever is happening,

happen", around some things it's important for her to be "clock-oriented".

> I have a bit of a fetish about making appointments on time. . .Very seldom do I ever not arrive on time, or miss out on something I promised to do. I have an underlying structure. . .It comes from nursing too. We always wear watches, usually with second hands. . .I always begrudge sweep hands. That must sound as though "time comes or time goes". In one sense it does.

As if in summary, Subject G wrote under her definition of time:

> I try to be punctual and mostly am. I work overtime if necessary (without keeping track of it) but I also like to be as elastic as possible-able to linger, dilly-dally, use time to absorb what is happening. . .I don't like time clocks, time sheets, reporting how I use my time. I tend not to do it-trouble.

When asked if she ever felt her time was different from that of those around her, this subject replied, "Yes. Sometimes I feel I'm 'neither fish nor fowl', when I feel out of sync. It's cliche time-'a different drummer'." This refers to her feeling out of step with others. She went on to describe a feeling of being out of step with herself:

> It's a combination of slower and faster-one foot full on the accelerator, with the other foot on the brake. I would love to be fully on the accelerator, but maybe that would get me into trouble. I would go careening. . .I'm not sure which is really the pace for me. . .I'm feeling the urgency to let off the brake-accelerate and see where we're going. I'm still scared about being not cautious, but sensing that the "stride" is more my pace. I think of life as a journey or path. There are times for striding, times for getting off the path and lounging, having a picnic. I'm going to let it come more from inside. In the past the "brake" was the feeling of obligation, responsibility. I think I'm gradually easing off on that and seeing what will happen. It is taking off the "externals" and allowing the "internals". This is sometimes quite chaotic.

Attitudes to Death

In response to the stimulus word death Subject G wrote:

> Grim reaper? Angel of Mercy? I don't know. Mostly now I think a merciful friend who will help me escape from a worn out body-although I know I'll resist him (or so I think now but maybe not when I'm really ready). I am afraid of the dying process if prolonged. I have seen a lot of suffering, pain. I am hoping that it is less painful than it looks from outside.

As further elaboration she said, "I'm afraid of not being able to breathe, of pain. I'm fearful of how I will be".

This subject believes that there is something beyond death. "There must be something more that makes this all make sense. . .There will be a joke, some perfection that we don't see." In response to the stimulus word immortality, she wrote: "Yes. A going on to I'm not sure what. I think it might be the great AHA!"

Subject G has given considerable thought to death and has faced several personal losses of people close to her. She has shared her understanding of her own experience with death by leading a group for people dealing with their own grief. This subject suggests that we deal with death on a daily basis. "We have to let go of something in order to acquire something more. We can't just continually pack things along with us. Something has to die to leave room for the next."

Religion or Spirituality and Time

Subject G said, "I was brought up a three-times-a-Sunday kind of church person and I'm glad". When asked if she considered herself a religious or spiritual person, she replied:

> Yes, very much, and I've gone through various stages and phases. . .I have been to church about two times in seven years, I suppose. I couldn't hack the system, the machinery, and what that does to me. The politics got to be too much.

She has carried on her religion in private.

> So, I'm up early in the morning. It's very important to me to read and think and pray. That's where I get my pictures. . .I have a sense of a very friendly, strong Christ. Something that I can trust that will not be too far away.

She is beginning to miss being a part of the group of people who were the church. "That's why (a recent workshop on spirituality) was so great for me. I felt as though I was getting some strength again." But she remains reluctant to "join up with anything organized".

Subject G meditates regularly. In response to the stimulus word solitude she wrote, "Communion time with my interpretation of God". When she meditates she experiences a change in time. "Twenty minutes seems like 2 minutes. . .I seem out of touch with time then."

Unusual Experiences Associated with Time

Subject G expressed a strong conviction that time "doesn't behave" for her. "Time is odd. Sometimes a minute is eternal/timeless. Sometimes I have a big chunk of time that feels cramped-in the box, under the gun, under a thumb." Apart from subjective alterations in the rate of passage of time, she reports other "unusual" experiences. She is aware of having had deja vu experiences but cannot recall examples. "At different times in my life I've had the feeling that it's been lived before."

Precognitive experiences are becoming "more and more commonplace" for her. Most are of a mundane nature, "Silly things like parking. I will often know that if I go around the block one more time there will be a spot." Another recent example follows:

> Yesterday I was working in my family room in my nightgown and I thought, "You know, the meterman is going to come this morning, and I'd better get into my housecoat". I never know even at what time of the month the meterman comes. And before long he was there.

Another experience which she regarded as precognitive was of a more serious nature:

> It was about (a young friend), my son's soulmate. He would sit here, at the dining room table and we'd talk and talk. One Sunday afternoon in February, 1980, I was setting the table. I had a sense someone gave me a pat on the rear end, although there wasn't anybody there. . .I didn't think anything more about it, really. On the Monday I found out (he) had died in a scuba diving accident about that time. . .That would be a perfect way for (him) to communicate. His way would be slightly irreverent. His death had a traumatic effect on all of us.

Subject G receives frequent "intuition or hunches" which she thinks are based on a combination of things: "feelings, intelligence, along with something else". She regrets that rather than listening, she "periodically out-guesses" herself.

> I frequently have a sense of being led in some way. If I'd listen to that, I'd do so much better. I'll think, "That's nuts. That's not rational". . .I'm paying more attention to it. It seems trustworthy, whereas sometimes my mind isn't. . .I wish the messages were clearer! But, really, sometimes when I'm hammered over the head with it, I still don't pay attention if I already have it in my mind that I'm going to do something one way or another.

Subject G also described a "sense of knowing" that she experiences which seems to be connected with the past rather than the future:

> I spend a lot of time in the morning sitting quietly, imagining lots of things-not as strong as visitations from the past-but a sense of knowing, as if something has short-circuited. It's not a sense of person, more like a mind-to-mind communication without words.

Meaning of Time

As a symbol for time Subject G drew two diagrams, the first dated 1980, the second dated 1983. The first, about which she said, "Life is supposed to be:", was a single loop as shown below. It seems to represent time as coming full circle:

Figure 15. Subject G's First Symbol for Time

In reference to this diagram, she quoted from T. S. Eliot:

> We shall not cease from exploration
> And the end of all our exploring
> Will be to arrive where we started
> And to know the place for the first time.
> Through the unknown, remembered gate.

The second, about which she said, "But life may be:", is a rising spiral.

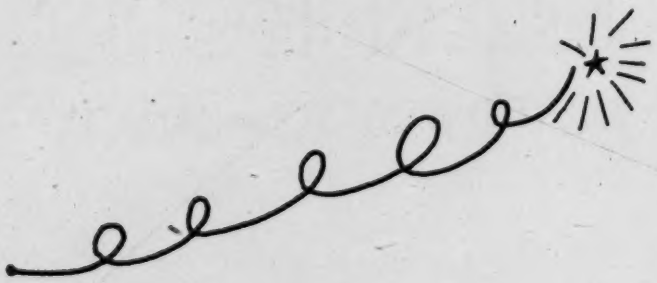

Figure 16. Subject G's Second Symbol for Time

She commented, "This is not accurate in the sense that there is more backtracking, the spiral is not so neatly upward and onward-not by a long shot!"

It will be recalled that the symbols for time that came to her mind were "a lovely gift" and "warm plasticine". To the stimulus word time Subject G responded with several attitudes and feelings about time, as well as the following thoughts on the topic: "Time is not money. Time is time. It is expendable, expandable. It is usable."

When asked how she would define time, this subject replied:

> I suppose it's what life runs along, what we live our lives in. It's a way of marking our lives, the process of life. . .I've never thought of it in a concrete way. I'm describing it, not defining it. . .Time is marked by the sun. It is handy to have a way of marking your progress-day, night, months, years. Time is a four letter word. Fascinating. Spend time. Use time. It certainly is something we use all the time, isn't it?. . .I see time as being a process. It is measured in little static chunks. It's comfortable to have time-to be able to measure. . .I would hate not to have it!. . .It gives us something to leap from. It is like rocks across the stream. . .It's like harmony, something to measure ourselves by, like a tempo.

Summary and Evaluation-Subject G

Subject G's view of universal time is very expansive. She volunteered that on a line representing time her life would appear as a dot. She is more and more conscious of "Time Immemorial", the foreverness of time. She believes she will continue on after the death, suggesting she has an extended view of her personal time as well.

She suggests that time is something of this world only. We think of time in terms of beginnings and endings here because we need to. She guesses time won't be relevant before birth and after death, so there will be no beginnings and endings.

Her earliest memory is of an event when she was two or three years old, so she has awareness of 45 or 46 of her 48 years. She estimates she will live until 78 years of age.

She drew an atomistic configuration of circles representing the temporal zones, suggesting minimal relatedness among the past, present and future. The circles were different shapes but about the same size, so no zone was judged to be dominant. She located herself in the "present", suggesting its possible importance to her. The action in her TAT story takes place in the "here and now". The content of the story suggests an orientation to the future as well as the present. She volunteers that she

spends most of her "thoughts and feeling in the present". However, she also mentions her tendency to lunge off into the future, "always trying to catch my past up with my future". In contrast with her attraction and commitment to the present and the future, she suggests she simply uses the past to reflect on and as "a foundation for basing one's future and present on". She admits she is probably more trapped by the past than she realizes, but her other comments don't suggest a strong orientation to the past.

When asked to select the temporal zone that influenced her decision, she said, "All three". The present was most important, the future second and the past was also considered. However, her description of the decision suggests that her strong sense of "rightness" in the present was a result of a clear vision of what she now wanted to move towards in the future. Again, the present and particularly the future seem dominant. She claims the present is good for feeling, living, enjoying, "smelling the roses". The future is good for dreams and hopes.

The metaphor she chose to represent time was "a lovely gift", a substance like warm plasticine-stretchable, shapable, in colours. It's purpose is to play with, although sometimes it feels like hard work. This suggests a comfort with and a gratitude for time. In spite of her vivid metaphor, Subject G claims to be out of touch with time. "I'm not very often conscious of time. . .I just kind of move along through it." She feels like she is in a "time out" period now, a time to relax and retreat rather than struggling with a sense of urgency as is more natural for her.

Time does not go by at a regular pace for Subject G. "I don't know what a 60 second minute feels like. . .time won't behave. It sort of lunges and leaps." She also uses the cliche of time dragging when she is dreading something and speeding up when she is doing something interesting. Sometimes it is important for her to be oriented to clock time. She has a "fetish" about making appointments on time. However, her preference is to be as elastic as possible-to linger, to absorb what is happening. She doesn't like time clocks or time sheets.

She feels out of rhythm with those around her and uses the cliche of "marching to a different drummer" to describe it. She also describes an awareness of being out of step with herself. It is a combination of slower and faster-one foot full on the accelerator with the other foot on the brake. She feels like letting off the brake, but is afraid. At the same time, the "stride" is her pace, and she has experienced the brake as a feeling of obligation, responsibility or external control. This ambivalence about her personal pace or rhythm in time leaves her somewhat at odds with time.

Subject G is not certain whether death is an enemy or friend, but suspects the latter. The dying process frightens her, but she looks forward to the surprise that follows death. She suspects there will be a joke, some perfection, "the great AHA!". This subject has given a great deal of thought to death. She suggests we deal with death on a daily basis, in the form of constant "letting go". "Something has to die to leave room for the next." So, Subject G has a concept of life beyond death and of death within life.

She considers herself religious and spiritual even though she hasn't attended church for years. She carries on her religion in private. She gets up early in the morning to read and think and pray. She has a sense of a very friendly, strong Christ, something she can trust. She meditates regularly as a means of communing with her interpretation of God. This results in a change in time. As well as her feeling out of touch with time, twenty minutes seem like two minutes.

Subject G has had many unusual experiences relating to time and she is paying more and more attention to them. She is aware of having had deja vu experiences, but cannot recall examples. Precognitive experiences are becoming commonplace for her. Most are of a mundane nature like finding a parking spot or knowing the meter reader will be there soon. Some are more significant, such as awareness of the presence of a friend who she later learned died at that same time. She says she receives frequent "intuition and hunches" which she thinks are based on "feelings, intelligence, along with something else". She also describes a "sense of knowing" which seems to be connected with the past, more than the future. It feels like a mind-to-mind communication without words. It is not surprising that she frequently has a sense of being led. Subject G is definitely open to and influenced by the effects of the future and the past on her present.

The symbols she drew to represent time were a loop which seems to represent time as coming full circle and a rising spiral. These images suggest movement and a combination of linearity and circularity. Her definitions of time include: "What life runs along. What we live in. A way of marking our lives. A process." She suggests it's like rocks across a stream. It's like harmony, a tempo. She also suggests it's comfortable to have time.

On the whole, Subject G seems to feel at ease, even compatible with time. She lives the present fully. She eagerly awaits the future and even looks for a fulfillment to come with death.

Subject H

Personal Data

Subject H is male, 36 years of age, married and has one young child. He lists his occupation as Psychologist/Student and holds a Masters degree in Education. He was born in urban Alberta and declares himself to have no religion.

Themes

Expanse of Time

Subject H marked his birth 1.5 cm from the beginning of the 15 cm line representing time on the Lines Test; he marked his death 4 cm from the end. This would suggest he sees his personal time as occupying most of "time". However, he later expressed an expansive view of what he calls "cosmic time". His lifetime represents a small part of cosmic time. In fact he holds a belief that this lifetime may be only a small part of his personal time:

> Sometimes I believe in reincarnation. There are things which are happening to us now which we may have instigated a long time ago, rather than in this lifetime. We may not have that much influence over them, but in some way we are responsible. We still have the choice of being able to respond to them in a free sense.

Subject H's very long term and connected view of his personal time extends into the future as well:

> There's a continuity. We are responsible now for what's going to happen in the future, as well as what's happening now. . . Right now I still feel I have a lot to learn about being here in a human body, just being an entity. Until I understand that I'll keep on coming back. So in some sense I see a long way into the future-beyond my human body. What I'm doing now is creating energy which (will influence what will happen) in times, realities long from now.

When asked if time has a beginning and an end, Subject H replied:

> No, I don't think that things have ever not existed. And something will always exist. Existence can only come in terms of a time frame. I can only have a sense of myself in relationship with other people, other things-my past history, my future. That's how I think time is very related to existence. I guess we can only exist in relationship with time, or with things.

Subject H estimated that he may live until about 75 years of age. "I'm 36 now. I don't know if it'll be an old death or a young death. If I'm half way, I'll be

about 70, probably closer to 75, I'd imagine." In terms of his own lifetime, Subject H is becoming aware that he is ageing, that his time is becoming scarcer, but more extensive in the direction of his past:

> I feel that I want to slow the process but at the same time I know that the ageing process will continue until finally all functions stop. . .I can see myself as having a longer history now. As I grow older, I can think further back in the past. . . .I think, "That was a long time ago." And I feel a bit older.

This subject's earliest memory took place when he was four:

> I was sitting on the front porch of our house. Dad and my brother are driving away to visit our new house. I was sad because I had been told I couldn't go this time. They had explained to me that Dad had things to do, so I couldn't be along. They recognized I felt sad, and said there would be other times when I could go later.

Subject H also described two memories from when he was three, but he said they didn't have the same emotional impact. With memories beginning at three or four years of age, he may be considered to have lived with awareness for 32 or 33 of his 36 years.

The TAT story written by Subject H covers a very short time span-a few minutes. It concerns the thoughts of the boy as he sits looking at the violin.

Temporal Zones

This subject's TAT story was written exclusively in the present tense and describes the boy's present thoughts along with some of the concerns of the boy's parents about him.

In response to the Circles Test Subject H drew three circles which are loops in a continuous line:

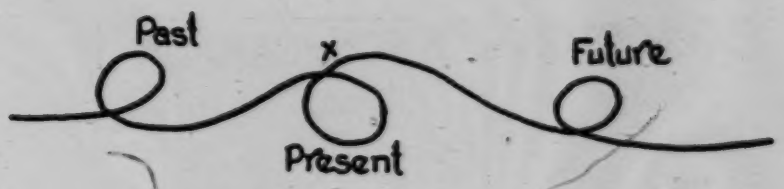

Figure 17. Subject H's Circles Test

The circles are all approximately the same size, so no temporal zone would be judged as dominant. Because the circle do not overlap this temporal relatedness design would be classified as "atomistic" by Cottle. This would suggest minimal relatedness among the temporal zones. However, his choice of a single line forming the configuration of circles seems to represent a flow among the time zones. During the interview he volunteered: "They are joined together. It's like a ball rolling, going in a certain direction. It tends to be a circular direction-in a round loop. Within that loop there are more cycles going on." This image of the line which circumscribes the past, present and future circles coming back around to meet itself is the symbol Subject H chose to describe time in question four. In the Circles Test he located himself just above the "present" circle.

On the Lines Test, Subject H delineated a very extensive "present" by marking one boundary of the present 1 cm from his birth and the other 3.5 cm from his death. Therefore the present is represented as over half of his lifetime. He has labelled the point separating the present from the future the "present moment". This suggests that he sees his "present as having been going on for a long time, and as being highly significant:

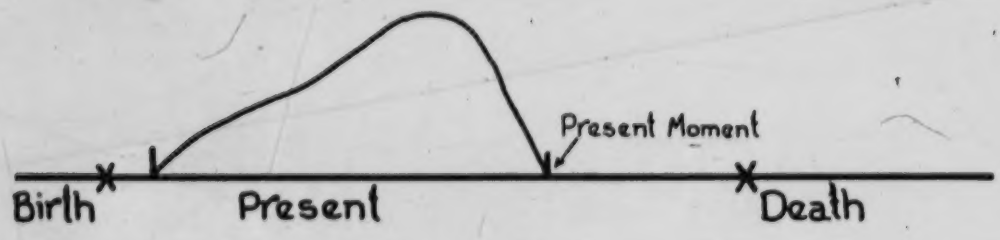

Figure 18. Subject H's Lines Test

In response to the stimulus words relating to the temporal zones Subject H replied as follows:

Past--"The past exists in memory and plays a useful function in showing me where I've come from-brings a sense of continuity, (a sense) that I have a history. It gives me some sense of security and an idea of what will happen in the future. I don't like to dwell much on the past. It keeps me from doing what is necessary for the present."

Present--"The present is very difficult to experience. The experience of the present becomes most immediate when I meditate. Even then it lasts for a short time. The present is constantly coming and going because other thoughts keep coming in.

There's an incredible impulse to move, to avoid what's going on at the present. My experience of the present is noticing thoughts and sensations appear and watching them leave. Awareness of this process gives me a sense of immediacy and independence. It brings a quality of freedom."

Future--"During times that I have felt most creative I have experienced a blending of the past, present and future. This happens most predominantly when playing music with other musicians, improvising. What is played must relate to what was just played and yet must be played with attention to what will be played. The time continuum collapses into an ongoing present. When this works well the results are exhilarating-often better than a sexual orgasm. All senses are alert, super-charged and in harmony."

When asked about the feelings he associated with each of the temporal zones, Subject H replied as follows:

Past--"Sometimes there's a longing, when I think of something in the past I would like to have happen again. . .As I think farther back, I think 'That was a long time ago.' And I feel a bit older. I start to think too, 'Well, what have I achieved during that time?' I start to feel there are things I wish I had accomplished which I haven't--a little bit of regret. . .When I look back I see where I've been and how I was, and can see that I've changed a great deal, in a positive sense. That gives me some optimism that those changes will continue in the future."

Present--"I think of spontaneity, of being able to feel fully alive in the present. That brings a sense of satisfaction, peace, unity."

Future--"Feelings like worry, anxiety, concern. A lot of my thoughts are projections into the future. So that if I don't accomplish now what I need to, this will be the result. I see myself as planning, worrying and trying to make things more secure somehow. To stay entirely in the present is incredibly difficult. You really have to be very well trained or use a lot of perseverance to keep yourself working in the present."

When asked to consider an important decision he had made in the past and to select the temporal zone that was most influential in shaping the choice, Subject H replied that he couldn't separate one from the other because they were all important. "I thought about where I've come from, what history I have had. I also thought presently-where I was at that time. Also, what would it hold for the future if I decided (to go ahead with the change considered). . .It was difficult to make the choice because there were pros and cons either way and many factors to consider. There's not necessarily a perfect moment for anything. After considering everything carefully, it

was more an act of faith." This statement suggests a trust in the future.

In response to question six, Subject H completed the sentence stems in the following way: "The past is good for learning-looking back, reflecting, rather than lamenting. The present is good for being, just being totally. The future is good for planning, for having a goal, working towards something."

Subject H places a heavy emphasis on the present, as well as stating that a lot of his thoughts are occupied with the future. He believes in "fate", in the sense that we create our own futures in the present. "There is a continuity. We are responsible now for what's going to happen in the future, as well as what's happening now." He also emphasizes the effort involved in staying in the present moment:

> I think it is difficult for us to understand ourselves in the moment. It's like when we have goals that we want to reach, ways that we want to be. Then when we get there, it's not the way we thought it was going to be. In other words we can never quite catch up with ourselves. We are always behind or always in front of ourselves. We are never really there.

Attitudes to Lived/Clock Time

Subject H seems to experience time as a resource that he enjoys using in a way that reflects what is important to him:

> I wear a quartz watch, and it keeps close to perfect time. I really enjoy it. I like to know precisely what the time is. Being punctual is important. I just don't have a lot of time to take care of the things I like to take care of, so a lot of times I have to watch the clock. When I wasn't as busy as I am now, time wasn't as important. So in a sense time has changed. What I do with my time during the day is more important. . .I seem to be more concerned that I fill up my life with quality time-watch that I'm not wasting time.

He said that his present attitude towards time is not one he has always held. At one time he was less busy and could spend the whole day "maybe doing nothing". He regards that stage in his life as important because it allowed him time for contemplation and introspection:

> I really enjoyed that time. That seemed to be part of my development which was necessary at that time. There are other more important things which I need to do for myself now. So I have become a little more rigid or more precise in what I do at times-the way I talk, the way I write, in my actions.

Subject H may be referring to a self-discipline he has introduced into his life. He

believes this to be part of a developmental trend.

In one sense, this subject experiences time going by at a regular pace, "I usually know pretty well what time of day it is, or how long I've been doing something. I can judge that pretty accurately." However, he identifies circumstances under which time speeds up and slows down:

> Sometimes it will shift. For example, when I had to do an important presentation I was in there for an hour and a half. I didn't stop to think, 'How long has this been going on?', I was so involved. When I looked at my watch it seemed to have gone by quickly. But I wasn't surprised, because I know that when I am intensely involved in things, time will go by quickly. . .I think the difference is that I don't think about the time while I'm in those intense situations, where my attention is so focused. Afterwards, when I look at it I say, 'That's about how long it took. That makes perfect sense that one or two hours have gone by.'

Subject H pointed out that both intensity and concentration have to be present in this experience of time moving quickly. At times he may be talking to someone in an intense manner, or concentrating on writing a paper, and his mind is "bouncing all over the place", and time doesn't speed up.

Time slows down for this subject when he is attempting to concentrate in the absence of intense involvement:

> I find that when I'm attempting to concentrate on one thing--when I'm looking at a certain thought, an image, a sound, a mantra or whatever-time will go very slowly. To hold our mind on something for more than five or ten seconds at a time is phenomenal.

When asked if he ever felt his time was different from that of others around him, Subject H replied:

> There have been times in my life when I've felt very alienated-from other people, and from the world I was in. That alienation put me into a different time frame. I couldn't, wouldn't, join what other people were doing without being incredibly self-conscious, or without part of me looking at all this as if from above or someplace else, seeing myself act in it, and seeing myself from a different perspective.

It is evident from this statement that Subject H is able to distantiate himself from his surroundings, and that this change in spatial relationship is connected with a change in temporal relationship.

Subject H is keenly aware of his personal time moving more quickly as he gets older. "As I see myself growing older and showing signs of age I feel that I want to slow the process; but at the same time I know that the ageing process will continue."

He accepts this process. "My desire is to co-operate with the process with equanimity and some humour. The ageing process reminds me that I am mortal and I feel a little surprised and resentful."

Some of this subject's attitudes towards time are contained in his response to the stimulus word time, "Time. . .is the medium that gives me a sense of identity. Usually time moves too fast. . .I sense time 'slipping by'."

Attitudes to Death

Subject H has given considerable thought to his own mortality, to what might follow death and to the meaning of death. In response to the stimulus word death he said, "Death is more than physical. . .We experience small deaths as we live". He suggested that the loss of a relationship is an illustration of a death experience. Certainly the aftermath resembles the grief process:

> I went through a period of depression, fear and resentment. After some months I had finally 'finished' with the relationship and all the negative feelings. I was left with a feeling of relief, of emptiness but at the same time of great fulfillment, complete or near complete presence.

He went on to give further associations with death:

> I associate death with anger, regret and fear for my own mortality, my unfulfilled dreams. I dread the pain that may be involved in my physical death. . .I also look forward to my death. . .in the sense that I will have the opportunity to experience a "good" death. . .letting go of all my attachments, of who I am and what I have. Death for me in part presents an opportunity for incredible growth.

During the interview Subject H went on to explain what would be involved in a "good death":

> . . .being able to transcend myself-a lot of the petty worries and concerns that I have about myself and the things I have, attitudes, beliefs, the things I'm trying to hang onto, the prime one being my sense of self, my sense of body.

He sees this transcendence happening during the dying process. He also feels that learning to let go of "things" (individuals, thoughts, opinions) more easily, that is, practicing dealing with "small deaths", will make his "eventual, mortal death" easier. "So, in a lot of ways I see myself preparing for dying-as if life is a preparation for death, and whatever is beyond that."

Subject H believes there will be something beyond death, although he has

difficulty picturing it.

> My focus is so narrow from where I am now that I can't conceive of what it might be like. . .I'm sure it will be something completely outside my realm of understanding. . . even our language limits our understanding of what follows death. . .It's not a 'thing' in the way we usually think of 'things". . .There could be a number of different realities, realms of consciousness. Things like the past, the present, the future really don't exist. They all collapse into one.

The ageing process has made this subject more aware of his physical death: "The older I get, the more often a sense of my own mortality comes to mind--especially now that my body functions perhaps slow down a bit. I get tired more easily." He admits he is not ready to face death yet. "Death sort of scares me, and also really intrigues me." He guessed that he will live until about 75 years of age.

Religion or Spirituality and Time

Subject H listed his religion as "none". When asked if he considered himself to be a religious or spiritual person, he replied:

> A spiritual person rather than religious. . .a religious person I think of as having a concept of a diety or dieties. . .What discouraged me from churches of any sort is that they tend to have fixed beliefs in the form of their scriptures. Then it gets to be "us against them. . .my God is right and yours is not". That separation causes a lot of conflict, wars and hostility. . .I'm not trying to negate the positive things it has done, but that has made me cautious about (religion).

Subject H practices meditation for an hour to an hour and one-half every day, using a Buddhist technique. He says that he remains aware of how much time has passed while he meditates. "I've come to expect it to seem to go quickly."

He considers himself a strongly spiritual person:

> I don't really see the spiritual aspect of my life as being divorced from the practical. . .Taking care of your business, watching what you do, doing things with awareness, watching your motivation for doing things, can be a very spiritual way to live your life.

Unusual Experiences Associated with Time

When asked if he has had any precognitive experiences, Subject H said, "Yes". He is beginning to trust that ability more and more and is sure that they happen often-more than he is aware. One such experience which was clear to him is

described below:

> Sometimes it will happen in dreams. In one dream (my wife) was on the phone and I was listening. I realized from her conversation and from her face that something tragic had happened-a relative was sick or had died. She said, "I'll catch the next plane out there." That was the end of the dream. I woke up and felt uneasy with that. I didn't bother telling (my wife) because I didn't want to upset her. Then at noon that day, on the radio, I heard that her uncle had died. And I thought, "Oh, that's what the dream was about".

When asked whether he has had deja vu experiences he replied, "No, nothing comes to me really strongly". However, Subject H reported another alteration in his perception of time. It happens when he is improvising music with other musicians and involves the "collapsing" of time-the coming together of the past, present and future. "It's an incredible feeling, incredible mental sensation, physical response. Those are magic moments." He went on to explain what he thinks is involved in this experience:

> When you are improvising all your senses have to be in tune. When we were working with a group of dancers, I had to be looking for what they were dancing. So my visual awareness was involved, as was feeling-in terms of the touch of the instrument. You have to hear what you are playing as well as what everyone else is playing. When you begin to communicate on those lines (with the other musicians) you become very intimate, without words. You almost have to get into the other person. What you are going to play next has to relate to what you've just done. . .You're not sure what might happen next but you know that there has to be some continuity, because an improvised piece takes place over a period of time. . .Once you work to get there, something else seems to take over, an energy. You as individuals hook in together, working along the same time frame.

He described this experience as a "blending of the past, present and future". It is as if "the time continuum collapses into an ongoing present". Rather than feeling like a stepping outside of time, this subject suggests it is more like "stepping into it-whereas most times we are outside of it. We lose our sense of separation, of being on the outside of everything else, everyone else, and feel a sense of unity." He goes on to suggest that these moments of intense involvement produce a feeling of freedom. "Those moments are like gifts because you are just so overwhelmed with them. . .In a spiritual sense it's surrendering, giving up your sense of who you are."

Meaning of Time

The symbol Subject H drew to represent time consisted of a continuous line describing a series of loops, and curving back around to form a circle:

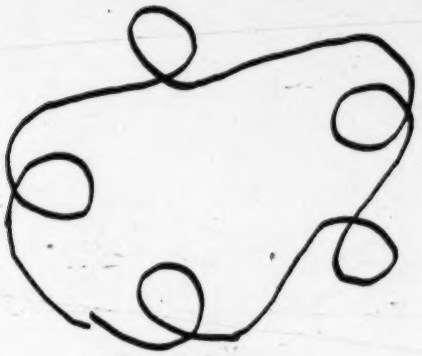

Figure 19. Subject H's Symbol for Time

This diagram very intentionally gives the impression of time flowing in a direction (linearity) and also includes an element of circularity. "It's like a ball rolling. It's going in a direction, but it's a circular direction. Within the loop are more loops representing past, present and future."

In response to the stimulus word time Subject H alluded to it's meaning to him, "Time is what we live in. It is the medium that gives me a sense of identity". When asked to define time, he replied:

> The function of time is to give us a sense of continuity. Time has a past, present and future. Time is a continuum. An individual can, at any time, fit him- or herself along that continuum. Time is something that is a subjective experience. We share the same outer time in that today is Saturday. Then there is an inner time the experience of which is unique for the individual. . .We only exist in time. Only in relationship can we conceive of being. And that's what time is. Time is in relationship to something else. It's all that there is. As far as we are concerned in this reality, time is everything. So, to describe time to somebody, to try to define it, you have to take somebody out of it.

Subject H emphasized that time is very much of this worldly reality. "In other realms, other realities, I'm not too sure. My understanding is that our normalized understanding of time does not exist in other realities. The past, present and future collapse. I'm not sure what's there, but something is, I guess."

Summary and Evaluation-Subject H

In spite of diagramming his lifetime to occupy most of the line representing time, Subject H expressed an expansive view of what he calls "cosmic time". He volunteered that his lifetime is a small part of all time. In fact, with his belief in reincarnation, including past and future lives for him, his lifetime may be only a small part of his personal time. He said that time has no beginning and end. "I don't think that things have ever not existed."

With his earliest memory having taken place at three or four years of age, he has awareness of 32 or 33 of his 36 years. He guessed he will live until about 75 years of age. He is aware of his ageing. His time is becoming scarcer, but more extended in the direction of his past.

On the Circles Test, Subject H's three temporal zones were not represented as distinct circles but as loops formed by a continuous line. Because they do not overlap, the configuration might be classified as "atomistic" by Cottle. However, his choice of a single line suggests a flow from one time zone to the next, a continuity. He said, "They are joined together. It's like a ball rolling, going in a certain direction. . .a circular direction".

He further expressed the continuity or connectedness of the temporal zones in his reply that all temporal zones were important in shaping his decision. He couldn't "separate one from the other". After considering everything-his history, where he was, how his choice would effect the future, "it was more an act of faith". The interconnectedness he experiences among the temporal zones extends to the distant past and future. He suggested that "there are things which are happening to us now which we may have instigated a long time ago, rather than in this lifetime". In a similar way, he said we have a long-term effect on our futures. "What I'm doing now is creating energy which [will influence what will happen] in times, realities long from now." When feeling more creative, he experiences a blending of the past, present and future. It represents an integration of the temporal zones.

On the Circles Test the circles are the same size suggesting that no time zone is dominant. He located himself above the "present" circle. The importance of the present is also suggested by his representing it as over one-half of his lifetime on the Lines Test. His TAT story was written exclusively in the present. He volunteered that he sees his "present as having been going on for a long time and as being highly significant. In spite of its importance to him, he finds the present very difficult to

experience. It is constantly coming and going because other thoughts keep coming in. His experience of the present is "noticing thoughts and sensations appear and watching them leave". Being aware of the present gives him a sense of immediacy and independence, a quality of freedom. The feelings he associates with the present are being fully alive, spontaneity, satisfaction, peace and unity.

Although he doesn't like to dwell on the past, he finds it useful because it brings him a sense of continuity, some security, and an idea of what will happen in the future. Sometimes he feels a longing for the past and some regret. Looking back at the past gives him optimism because he can see that he has changed. This is proof to him he will continue to change. He says the past is good for learning from. He feels distant from his past.

Subject H associates feelings of anxiety and concern with the future. He admits a lot of his thoughts are projections into the future. He catches himself planning, worrying and trying to make things more secure for the future. However, he feels that the present is important in determining the future. "We create our own futures in the present. There is a continuity. We are responsible now for what's going to happen." These statements further demonstrate his heavy emphasis on the present, even when his thoughts are occupied with the future.

Subject H experiences time as a resource that he enjoys using. Punctuality is important to him. He likes to know the time and enjoys his quartz watch that keeps perfect time. Time has become more important to him as he has become more busy. Although he can judge time accurately, and usually experiences time going by at a regular pace, he identifies circumstances under which it speeds up and slows down. When he is intensely involved in something time goes quickly. Time slows down when he is trying to concentrate on something in the absence of intense involvement.

At times he experiences his time as different from others. He associates this with alienation or deliberate distancing from others. He connects this change in spatial relationship with a change in temporal relationship. Subject H usually feels time moves too fast; this increases as he gets older.

Subject H has given considerable thought to his death, what might follow death and its meaning. He suggests that we experience small deaths as we live, such as when we let go of relationships, thoughts, opinions or attitudes. This "practise" will make eventual mortal death easier. He is not ready to face death yet, so it holds some fear for him. He dreads the pain that may be associated with dying. At the same time, he is intrigued by death, and looks forward to a "good" death. Death represents

an opportunity for incredible growth. Subject H believes there will be something beyond death although he can't conceive of what it might be. He expects something outside his realm of understanding, maybe a number of different realities, realms of consciousness. It will be timeless. "Things like the past, the present, the future really don't exist. They all collapse into one."

Subject H considers himself a strongly spiritual but not religious person. He has no concept of a deity and no fixed beliefs in the form of scriptures. He sees the spiritual aspects of his life as integrated with the practical. When he meditates each day, he remains aware of how much time has passed. However, he has "come to expect it to seem to go quickly".

He cannot remember any deja vu experiences. He has had precognitive experiences, sometimes in dreams. One such dream predicted the death of a family member which took place at about the time of the dream. He is sure that these things happen more often than he is aware of, and he is beginning to trust his ability to experience them more and more. Subject H also describes an unusual experience involving time, a dramatic alteration in his perception of time. It happens when he is improvising music with other musicians and involves the "collapsing" of time-the coming together of the past, present and future into an ongoing present. This involves having all senses in tune-hearing, seeing, feeling. There is an intimacy among the musicians. "We lose our sense of separation." Something else seems to take over, an energy, and he feels a sense of surrender, an intense freedom. "These moments are like gifts." It feels to him like a stepping into time.

The symbol he drew to represent time is a series of loops curving back around to form a circle. It is made up of a continuous line and suggests linearity and circularity at the same time. He defines time as what we live in. We only exist in time. Time is in relationship to something else. It is all that there is. It gives us a sense of continuity, a sense of identity. He believes we share the same outer time with others, but there is an inner time the experience of which is unique for the individual, a subjective time. He thinks it is impossible to show someone what time is without taking him or her out of it. He emphasized that time is very much of this worldly reality. Our understanding of time does not exist in other realities.

Subject H's experience of time is marked by an expansiveness, a dominance of the present and a strong connectedness among the temporal zones.

Conclusion

The results of the present study on the experience of time have been presented in this chapter, subject by subject. The data from the Questionnaire on Time and from the interviews with the subjects have been reported under seven themes. In the concluding chapter which follows, a summary of the results on each of the seven themes will be given. Contributions made by this study and its implications for therapy and education will be highlighted. Suggestions for further research will also be made.

CHAPTER V

CONCLUSIONS

Introduction

This concluding chapter answers the question, "What have the eight subjects in this study said about their experience of time within each of the seven themes?". The results will be examined theme by theme. Each theme will begin with a brief description of what it includes. The researcher's assumptions or expectations regarding likely responses to each theme will be noted. A brief description of what the eight subjects said in relation to the theme will follow. Any conclusions which may be drawn from the thematic responses, such as commonalities and individual differences in the experience of time, will complete the theme by theme review of results. General conclusions arising from the study will be drawn. Contributions made by the present study will be discussed, as will implications of the study for therapy and education. Suggestions for further research will complete this concluding chapter and the reporting of the study.

Themes

A close scrutiny of the written responses to the questionnaire on time and to the transcripts of the interviews with each subject yielded seven themes, or response topics, which all subjects had commented upon. The range of responses to each of the themes follows. Each theme is introduced by a description of what is incorporated under the theme and the researcher's assumptions regarding that theme. At the end of the reporting of results on each theme, conclusions will be drawn.

Expanse of Time

Aspects of the Theme

This theme includes aspects of the quantification of time. The amount of time the subject perceives him or herself to have personally, and the quantity of "universal" time he or she sees as existing are elements of this theme. The breadth or narrowness of time in the view of the subject is reflected in several of the questionnaire items, including Cottle's Lines Test. Many interview questions, such as the one asking about the beginning and ending of time were expected to yield information pertaining to the expanse of time perceived.

Assumptions and Expectations

The researcher assumed subjects would have a notion of "lifetime", punctuated by birth and death. It was expected that most subjects would see time as encompassing more than their lifetime and that they might differentiate between personal time (their own time) and universal time (all time that exists). The Lines Test which encourages subjects to think of time passage in linear terms was expected by its author, Thomas Cottle, to elicit representations of personal time in actual number of years. For example, a 20 year old was expected to mark the present about one-third of the way between birth and death on the line representing time. He did suggest that some might interpret the time line as representing their entire life time, and that some others might mark off their own life times as a tiny fraction of the entire line. This researcher was inclined towards anticipating a variety of subjective responses to the Lines Test. That is, the indicated length of the present and its placement (thus determining the lengths of the past and future) was expected to be more reflective of perceived importance of the time zones than of any realistic estimate of lifespan. Also, the portion of the line representing "lifetime" (between birth and death), when considered as a ratio of the whole line representing time, was expected to reflect the subject's attitude towards personal time as compared to universal time, the time that exists outside the subject's lifetime. So, this researcher's expectations differ somewhat from Cottle's.

Results on the Theme

The expanse of both personal and universal time are elements of this theme. Results will be reported in a sequence from aspects of personal time to aspects of universal time.

When asked to estimate the age they might be when they die, all but two offered an age. One chose not to consider it, but he doesn't consider physical death to be important anyway. A second said she had no idea if it will be close or far away, but hoped she wouldn't be too old. A third "had no clear expectation", but suggested "two or three years from now, or 65 to 85". Another thought she would die "not past 30". The other four suggested the narrow range between 75 and 80 years.

Part of the instructions on Cottle's Lines Test was to indicate on the 15 cm line representing time one's birth and one's death. The divisions of the line produced by these marks represent the subject's lifetime and the time that the subject perceives to exist outside (before and after) his or her lifetime. This latter segment is referred to by

this researcher as universal time. Lifetime is an important part of what this researcher refers to as personal time. However, if the subject thinks in terms of life beyond death (immortality or reincarnation), the time he or she expects to experience extra to "lifetime" is also included in the concept "personal time". The measurements of lifetime and universal time on the time line are considered by this researcher to reflect the extensiveness or relative importance of these two time divisions to the subject. This ratio can be compared to anecdotal material volunteered by the subject during the interview regarding his or her view of the extensiveness of personal in relation to universal time.

At one extreme is the subject who describes an extended universal time, but an even more extended personal time (thousands and millions of years). He believes that universes are periodically destroyed, but that human souls are preserved on the soul plane. Two subjects occupied the whole time line with their lifetimes, thereby illustrating lifetime as equal to universal time. Cottle refers to this representation as an egocentric perception. One expressed a disbelief in anything to follow death and the other speculated in a future beyond death and in past lives, but he wasn't certain. A fourth subject drew his lifetime as 2/3 of the time line suggesting he sees his lifetime as a major part of universal time. However, he volunteered that this lifetime is a small part of cosmic time. Also, it may be considered a small part of his personal time since he expresses a belief in reincarnation. Another drew her lifetime as one quarter of the time line, suggesting she sees universal time extending beyond her lifetime. She doesn't expect her personal time to extend beyond death. Two subjects who represented their lifetimes as 1/50 and 1/70 of the total time line both expressed that their personal time is a very small part of an extensive universal time. Both believe in the finality of death. At the other extreme from the first subject is one who, in spite of initially drawing her lifetime as most of the time line, wrote below that she would like to draw another line and represent her lifetime as a dot. She expressed the foreverness of time, that is, a very expansive universal time. Also, she believes in a continuity after death, and therefore an extended personal time. It is clear that a belief in the finality of death does not determine the relationship the subject expresses with universal time, since two who expressed this belief equated lifetime with time and another two represented lifetime as a very small fraction of all time on the Lines Test.

Subjects were asked if time begins and ends. Most subjects volunteered a distinction between lifetime and universal time. Four answered, "Yes". One of these said, "Time begins with birth, and ends with death", indicating her personal time to be

all time. Another said, "Yes", and went on to suggest universal time begins and ends periodically, but his personal time transcends that and goes on forever. Of the four who answered, "No", all seemed to be referring to universal time. One elaborated, "We have beginnings and endings here because we need to. Before birth and after death time won't be relevant, so there will be no beginnings and endings".

When asked what time frame their TAT stories spanned, seven of the eight subjects replied, "Short, very short, a matter of minutes, etc". In sharp contrast the eighth subject replied that the action covered six years, but the background described covered three generations. So, most wrote about the boy as if he were frozen in the moment with his thoughts. One saw him in a much larger context of time.

Conclusions on the Theme

In summary, three subjects believed that their experience of personal time would be narrow or small (personal time ending with their physical death), and that universal time was expansive. Two saw their personal time as extensive (carrying on beyond their lifetime) and universal time as even more expansive. At the extreme of condensed or narrow view of the experience of time were two subjects who viewed their personal time as likely ending with their death and who equated their lifetime with all time on the Lines Test. This could be considered a truly egocentric view of time. At the other extreme was a subject who held an expansive view of universal time and an even more extended view of his personal time (his soul going on infinitely). It is clear that time as it is quantified takes on a variety of meanings to these eight subjects.

So, six subjects saw universal time as expansive; only three saw their personal time as expansive. Most subjects had a reasonably clear notion of how long their lifetime might be. Six suggested an age when they thought they might die. There were mixed responses to the question about time having a beginning and an ending, suggesting variability in certainty about the continuity of universal time.

Temporal Zones

Aspects of the Theme

This theme includes the orientation of the subject to the temporal zones-past, present and future. Which zone does his or her consciousness primarily occupy? How does he or she feel about each zone? Are the temporal zones seen as discrete or interconnected? Several questions on the Questionnaire on Time relate directly to this

theme, for example, the Circles Test asking the subject to represent the temporal zones as circles, the stimulus words past, present and future, and the TAT story tense. Many interview questions also are pertinent to this theme: one asking what emotional response the subject has to the past, present and future, another asking the subject to complete the phrase, "The past (present, future) is good for. . .", and another designed to determine which temporal zone was most influential when the subject made a major decision.

Assumptions and Expectations

It was expected that subjects would be familiar with dividing time into the tenses: past, present and future. It was also expected individual subjects would orient themselves towards one of the temporal zones and possibly disregard another. Individual difference was expected to show up. For example, some subjects might habitually occupy (in consciousness) the present, others might dwell on the past, and others might orient themselves towards the future. The researcher assumed that subjects might prefer one zone over another, and that he or she would likely orient towards that zone. However, the possibility that one might be drawn to a temporal zone he or she didn't find appealing was also considered. The opportunity is presented by this study to test Cottle's hypothesis that on the Circles Test the relative sizes of the circles representing the past, present and future was indicative of the perceived importance of the temporal zones to the subject. The sizes of the circles drawn by the subjects in this study can be matched with more anecdotal information about the subjects' attitudes towards the time zones. The same author considers the proximity or overlap of the circles to represent the perceived connection or relatedness among the time zones. Information that subjects volunteer about the discreteness or interconnectedness of the time zones, matched with the circles they draw, might help prove or disprove the validity of Cottle's assumption.

Results on the Theme

The results on the Temporal Zones theme will be reported under the two major headings Orientation to Temporal Zones and Temporal Zone Relatedness.

Orientation to Temporal Zones

Relative Sizes of Circles on Circles Test

On Cottle's Circles Test, the relative sizes of the circles drawn by the subject

to represent the past, present and future are assumed to reflect the importance of that temporal zone to the subject. Two subjects drew the three circles the same size suggesting no temporal zone dominates in importance. Three subjects drew the circles as increasing in size, or showing what Cottle calls "temporal development", from the past, to the present, to the future. Three represented the circles as increasing in size from the present to the past to the future. So, among the six subjects who represented the circles as varying in size, all drew the future circle as the largest. According to Cottle this dominance in size would suggest the relative importance of the future to the majority of the subjects in the present study. However, this is inconsistent with other results of this study and will be discussed further in the conclusions on this theme.

When asked to locate themselves on the circles representing the past, present and future, seven of the eight drew themselves in the "present". The eighth represented himself in the overlap between the "present" and the "future". Common sense prescribes this trend in responding to this straightforward request for information from subjects.

Tense of the TAT story

Two subjects wrote their TAT stories exclusively in the present tense and the content of the story referred only to the present. Three subjects wrote in the present tense but made references to the past, suggesting the influence of the past in the boy's present. One subject wrote in the present tense, but the story was strongly flavoured by the past and to a lesser extent the future. The remaining two subjects wrote in the present tense; however, their stories contained musings and aspirations about the future. So, the consciousness of all subjects seemed to be in the present when writing the TAT story. However, the present was flavoured by the past and/or future for five of the eight subjects. This may not be a significant result, since a request for a "story" implies action going beyond the present moment. The direction the subject takes away from the present (i.e., towards the past or future) may suggest the time zone to which the subject is drawn.

Time Zone Most Influential When Making a Decision

When asked to select the time zone that was most influential when making an important decision in the past, four subjects selected the present, that is, "what was right at the time" or "relevance to present circumstances". One of these commented that more generally, future implications were important to her when making a decision.

Two subjects said that all time zones had exerted an influence on their decision, but the present implications had been the most important factor. One said all zones were important but that future was most important. The eighth said that all were important, that he couldn't separate one from the other, but that ultimately the decision was made on "faith". Therefore, trust in the future was implied. So, all subjects considered the present implications of a major decision with the majority giving the present time zones the most weight. Three generally considered the future an important factor in important decisions, and one weighted all zones as important.

Relative Sizes of Personal Past, Present and Future on Lines Test

Instructions on the Lines Test were to think of the line drawn on the page as being time, and to mark on the line "your own birth and death", and "the boundaries of the present". This process resulted in the creation of several line segments, three of which may be thought of as the personal past, the personal present and the personal future. The relative lengths of these line segments was thought by the researcher to reflect, among other things, the relative importance of the time zones to the subject. One subject didn't mark boundaries of the present on the line, commenting, "There are no boundaries on the present. . .you create your own". A second subject indicated the boundaries of the present extending well beyond the boundaries of his own lifetime and occupying most of the time line. This suggests the importance of this time zone to him. However, other aspects of the current study suggest this subject is attracted to the past. His broad view of the present may reflect his interest in history and the insignificance he attaches to his own lifetime. Three subjects marked the boundaries of the present with their own births and deaths. This might suggest the importance of the present to the subject, or a strong orientation to the present on the part of the subject. This was confirmed by other data in all three cases.

Only two subjects divided the segment of the time line between their birth and death in a manner that produced a "present" segment within their lifetimes. One divided the line in approximately this manner: past-10%, present-60%, future-30%.; the other: past-55%, present-20%, future-25%. The former indicates in many other ways that he is, in fact, oriented to the present. However the latter seems to be oriented to the future, one of her smaller segments on the time line. She appears to have divided the line in a manner approximating the number of years she has lived in relation to those she thinks she has left. This makes her the only subject to respond to the Lines Test in the manner hypothesized by Cottle.

It is clear that no single approach to responding to the Lines Test came out of this study. The researcher's assumption that the divisions would represent the importance of the time zones was partially substantiated. Cottle's expectation that the divisions would represent the actual number of years the subject had lived and expected to live was not confirmed.

Responses to Stimulus Words

The Verbal Stimulus Test gives a list of six time-related words and asks for the subject's emotional associations and experiences. Responses to the words past, present and future are given here. Some of the feelings associated with the past are: fun, enjoyment, lack of regret, regret, and guilt. The feelings mentioned in response to the present were: spontaneity and impulsiveness. In response to the word future the following feelings were mentioned: excitement, happiness, helplessness to determine the future, apprehension, confidence in dealing with what comes, a gladness that the future never comes, and not looking forward to old age.

Some of the mental associations and experiences related to the past were: immaturity, lack of stability, rich collage of people, places, ideas, never quite dead, no sense of distance from past, a sense of smell, having had to attempt to move out of the past, hooked to past, resistance to the hold the past has over her, "it's over", its existence in memory, its usefulness in showing where I've come from, sense of continuity, security and things not accomplished. Associations and experiences related to the present were: always now, eternity, the eternal now, temporary, transient, passing at ungovernable speed, living in the moment, all I have, difficult to experience, comes and goes, awareness of present gives immediacy and independence and living in the present is a constant challenge . The association and experiences given in relation to the future were: hopefully long, can be whatever we choose to create, unexplored territory, infinite, I don't plan for future, unconsciously attuned to future, taking risks, accepting challenges, eternity of possibilities, planning, and trying to arrange security.

More feelings, both positive and negative, were mentioned in response to the past and future than to the present on the Verbal Stimulus Test. This suggests the past and future might be more emotionally provocative than the present. Mental associations and experiences related to all three temporal zones were varied.

Feelings Associated with The Temporal Zones

Because many subjects didn't mention any feelings about the temporal zones in response to the Verbal Stimulus Test, during the interview subjects were asked what feelings they associated with the past, present and the future. Some of the feelings subjects associated with the past were: lack of regret, amusement, oldness, experience, warmth, golden glow, idealization, guilt, regrets, harsh feelings, sadness, happiness, wonderful memories, security, longing and optimism (because when he sees change in himself from the past he knows that further change will happen), and being trapped by it.

Some of the feelings associated with the present were: enjoying today, relaxation, contentment, gladness to be alive, rewarded, happy, neutral, emotionless, never bad, glad to be here, sharper focus, less complete, more immediate, sometimes drifting, richness, excitement, meaningfulness, very satisfactory, peaceful, dull, fully alive, satisfaction, peace and unity.

Some of the feelings subjects associated with the future were: worry, concern, anxiety, a void, wonder, happiness, excitement, fantastic, limitlessness, coolness, expansion, broad horizons, expectation of change, some fears, neutral, emotionless, interest, full of possibilities, good, try not to have expectations, and optimism. The variety of emotions associated with each of the temporal zones is noteworthy. The present seems to have elicited mainly positive feelings. It cannot be clearly stated that either of the other zones stirs more positive or negative feelings than any other.

Usefulness of the Temporal Zones

Subjects were asked to complete the sentence stems, "The past (present, future) is good for. . .". In response to the past, four subjects mentioned it was good for learning from. Some other responses to the past were: equipping me for the future and similarly, foundation for basing one's future and present on, nothing, realization, anecdotes, a good story, and looking back, reflecting rather than lamenting. In response to the present, four subjects indicated it was good for living or living it or living as much as you can; four others suggested being, beingness, being alive or being totally. Some other responses were: enjoying people, experience, integrating the past, and enjoying it. In response to the future two subjects suggested it was good for dreaming and hoping. Other responses included: contemplating-it allows you a fantasy, purification of the soul, giving meaning to the present, stimulation, planning,

having a goal, and working towards something.

Temporal Zone Relatedness

Cottle suggests that the degree to which the three circles representing the temporal zones on the Circles Test touch or overlap reflects the connection the subject perceives among the time zones. Two of the subjects in this study drew the configuration which represents the extreme in connectedness or relatedness among the time zones. Cottle calls this a projected configuration. It is made up of concentric circles. Both subjects also verbalized a strong connectedness among the past, present and future. One said the past is solidified, the present is liquid, and the future is gaseous. He sees the time zones as made up of the same material in different states. He also said that he can choose the time zone out of which he wishes to operate. This suggests an easy movement from one time zone to another. The other subject who drew the projected configuration said, "Always in the present you are experiencing your past and you are looking forward to something in the future". She also said that memory (associated with the past) and imagination or projection (associated with the future) are parts of the present. These statements confirm a perceived relationship among the temporal zones.

One subject drew what Cottle calls an integrated configuration of circles. It is made up of overlapping circles and suggests the subject sees the time zones as related, but not as strongly as in the projected configuration. During the interview this subject didn't make a clear statement about the relatedness of the time zones. However, he said he is moving towards a cyclical view of time. Presumably in this view the temporal zones would be thought of as repeating in a pattern rather than following one another along a line.

One subject apparently drew the three circles as separate, and then joined them by drawing two more circles, one overlapping with the past and the present, and the other overlapping with the present and the future. The end result is an integrated configuration of five circles. However, because of the original drawing of the three circles requested this subject's configuration was judged to be atomistic, suggesting a minimal relatedness among the time zones. He shaded in the past circle and half of the present, indicating those portions are complete. The future and the half of the present closest to it are unshaded, indicating they are still open. As a temporal zone is "filled" one moves on to the next zone which is separate from it.

Three subjects drew separate circles representing the past, present and future.

This is Cottle's atomistic configuration and suggests a minimal relatedness among time zones. The first of these three elsewhere places his emphasis on an ongoing present. He seems to disregard the past: "It's over. . .It's good for nothing". He minimizes any influence he can have on the future and regards it as "no more certain than rolling dice". This indicates he in fact draws a clear distinction among the temporal zones. The second subject who drew an atomistic configuration of circles denies his separateness from the past. He claims the past is never dead and that he has no sense of distance from the past. However, he admits that he idealizes the past. This idealization may create the distance he is representing in the drawing of the circles. His reaction to the future is similar to the previous subject: ". . .so much is up to chance and incident".

The final subjects used an individualized approach to drawing the circles and were more difficult to categorize. One subject who drew an atomistic configuration in fact talks about an interconnectedness of the time zones. She commented, "The present is always tinged with past or the future. . .the present is suspended in the past, and exists only in the past or future". However, she labelled her discrete circles "present", "past-present" and "future-present", suggesting the blending of the present with the past and future. She also drew lines joining the present circle to each of the other circles. So her individualized approach to the Circles Test is more consistent with an integrated view of the temporal zones than the simple application of Cottle's categories would predict.

The final subject represented the three temporal zones as loops formed by a continuous line. Because the circles do not overlap, this configuration might be classified as "atomistic" by Cottle. However, the single line that forms the loops also joins them, providing a flow or continuity from one time zone to the next. This subject spoke freely about the strong relationship he experiences among the past, present and future. "They are joined together; it's like a ball rolling, going in a certain direction." He also reports an experience of the blending of the past, present and future. He seems to be describing a complete integration of the three temporal zones. Having allowed for a freer interpretation of configurations of circles on the Circles Test which did not fall cleanly into Cottle's categories, the expectation that proximity and overlap of circles would be predictive of the perceived interconnectedness of the temporal zones was upheld.

Conclusions on the Theme

Basically this theme covers the general orientation of subjects to the three temporal zones, past, present, and future, and the relationship the subjects perceive among the temporal zones. Two of the eight subjects in this study seemed to be oriented primarily to the present, one of them overwhelmingly so. The other said he generally tries to keep his awareness in the present. One subject was attracted to the past. The feelings and images he associated with it were the "warmest". There were some indications the present held importance for him as well. For two subjects the present was very important, but the past was also a powerful force in their lives, although not necessarily an appealing one. One of these subjects suggested she consciously associates with the present, but the past dominates her unconscious. The remaining three subjects placed an emphasis on the present, but were heavily influenced by the future. One of these suggested that the present is where she spends her thoughts and feelings, but she "keeps lunging off into the future". One of these last three subjects disregarded the past, the other two said they use the past as a foundation for the present. So, in spite of six of the eight subjects drawing the future circle the largest on the Circles Test, only three subjects in fact seem to be oriented towards the future and only partially at that. This is inconsistent with Cottle's hypothesis that circle size corresponds with the importance to the subject of the temporal zone it represents.

Three subjects indicated they perceived a strong interconnection among the three temporal zones. One of them showed an orientation to the present, one primarily to the present with the past also exerting an influence in her life, and the other primarily to the present with the future also important. One suggested that we create our own boundaries to the present and that we change them at will. He also feels he can choose the time zone out of which he wishes to function. He described an experience of time standing still, or of being outside time, as well as frequent precognitive experiences. The second subject who perceived a strong interconnectedness among the temporal zones described the "time continuum collapsing" and the past, present and future blending together into an ongoing present, as well as many precognitive experiences. He believes there is a continuity. "There are things which are happening to us now which were instigated a long time ago. . .we create our own future in the present." The third subject expressed the connectedness she experiences among the temporal zones in this way: "Always in the present you are experiencing your past and you are looking forward to something in the future". She

describes the present as expandable and as containing memories (representations of the past) and projections (representations of the future). She has experienced new truths in a way that feels like the present and the past coming together, but reported no precognitive experiences. Of these three subjects who indicated a strong interconnectedness among the temporal zones, two drew a projected configuration of circles and the other a configuration that was difficult to classify. This is fairly consistent with Cottle's hypothesis regarding the tendency for subjects who perceive a connectedness among temporal zones to draw overlapping circles on the Circles Test.

One subject drew an atomistic configuration of circles; contrary to Cottle's hypothesis, in verbal material he expressed the interconnectedness of the temporal zones fairly strongly. Another drew an integrated configuration of circles, expressed the cyclicity of time, and described an experience of "eternity intersecting the moment", the coming together of all time and the present.

Another subject who orients to the present and the future drew an atomistic configuration of time zone circles and made no comments to suggest a connection among the time zones. However, she is open to the influence of the future and the past on her present, in the form of precognitive experiences and "a sense of knowing that seems to be connected with the past".

At the extreme of lack of connectedness among the temporal zones are two subjects who drew atomistic configurations of the circles. One is oriented overwhelmingly to the present and the other is attracted to the past, although the present is also important. Both seem to see the past as complete and the future as up to chance and beyond their control. One reported no precognitive experiences and the other a "mild" experience of a scene from a dream showing up later in his life.

It is clear that there is some correlation between the configuration of circles representing the temporal zones drawn by the subject and the comments the subject volunteered about the relatedness among the past, present and future. So, Cottle's hypothesis regarding temporal zone relatedness being demonstrated by the configuration of circles drawn on the Circles Test is partially upheld. It is also obvious that some subjects respond with drawings which cannot, and must not, be interpreted literally according to the categories established by Cottle. The researcher was also struck by the variety and richness of the information subjects were able to convey by a fairly simple test.

Attitudes to Lived/Clock Time

Aspects of the Theme

This theme includes aspects of felt time. How does the subject react to time as measured off by a clock? Does time pass by at a regular rate, or speed up and slow down at times? Does the subject feel his or her time to be different from that of others? Two items in particular on the interview ask the latter two questions directly, and several others on both the questionnaire and interview pertain to this theme.

Assumptions and Expectations

It was expected that all subjects would possess a basic attitude towards time, although it might be difficult to articulate and might change regularly. The researcher also assumed all subjects would have experienced "external time" or time as measured by a clock and calendar. Subjects might feel comfortable with clock time, even depend on it as an anchor to reality. They might fight against time, feeling the tyranny of its passing too quickly. For others time might drag by too slowly. Most subjects may have experienced the rate of passage of clock time change, depending on circumstances internal or external to the subject. It was also assumed by the researcher that because of the subjective nature of time, most subjects, at least temporarily, would have experienced their time as different from others. Some of these attitudes might be related to the association of a subject with a culture that differs dramatically from that of urban North America in its treatment of time.

Results on the Theme

Subjects were asked if they experience time going by at a regular pace. One subject didn't respond directly to this question. He said he doesn't associate the concept of "pace" with his view of time. The distinctions he prefers to make; between richness and banality, intensity and lack of intensity, seem to be more qualitative than quantitative. However, his later reference to the paradox of time, "each moment is an eternity, yet each goes by very quickly", hints at a simultaneous awareness of two vastly different experiences of the "length" of the same moment.

Two subjects claimed that generally time passes at a regular pace. However, they both mentioned circumstances under which it speeds up and slows down. The remaining five subjects all said, some emphatically, that time passes at an irregular pace. One declared, "I don't know what a 60 second minute feels like. . .time won't behave". Most of these seven mentioned variations of the rule that time seems to pass

quickly when you are enjoying yourself and slows down when you are dreading or not enjoying something. Some circumstances or conditions which seem to speed up time for these subjects were: "when intensely involved in someth ing, when working on a paper, in moments of stress, when you are in a condition you want to be in, when doing something interesting". Some circumstances or conditions which seemed to slow down time were: "when trying to concentrate on something in the absence of intense involvement, when waiting for something, when waiting in uncertainty, when enduring something, when dreading something". One of these subjects said that the rate of passage of time depends on which plane (physical, emotional, mental, causal or soul) you are occupying at the time. For example, it moves slowly if you are thinking a lot. This same subject has experienced time standing still, "and that's a lot different from it going slow". This happens to him often when he is listening to music, not thinking and not feeling. It involves an awareness that there is no time. The same subject is aware of cycles in time, for example, the seven year cycle. Two subjects mention that they are able to change the rate of time passage by choosing where they want their awareness to lie.

So, seven subjects are aware of a change in the experience of the rate of passage of time. The eighth mentions a qualitative difference in the experience of time, at different times.

Subjects were also asked, "Have you ever felt that your time was different from that of others around you?". All eight replied, "Yes". One said "mildly. . .It's not something I immediately recognize." Sometimes she feels she moves faster and this results in an impatience with others. Two others didn't offer any explanation or specific example of their time being different, but quoted the cliche of "marching to the beat of a different drummer". Two subjects offered examples of people they felt were on a different time from them. One said his wife has been much quicker paced than he over the past few years. He suggests this is the result of an internal change in him; his pace has slowed down. He calls it a "stammering in relation to time". This change is in fact pleasant; he enjoys the passing moments more now. Another subject mentioned she has noticed a difference between her time and that of the children she teaches. She observes that they are in the present and the future; they haven't got any past.

Several other subjects offered explanations for their "different time". One connected it with the philosophy he carried over from his youth, "If it feels good do it". He says, "Today people are much more conscious about their spaces", so he is "out of sync". It is as if he has stayed with a way of life whose "time has passed",

resulting in his displacement in time. A second subject explained his "different time" as having to do with his extensive "experience with leaving time". "Most are afraid of leaving time because of their training that time is a necessary part of this world." So, he feels he has moved beyond a fear that restricts the experience of time of others. A third subject said she doesn't share the "progression in time that society is following". "I will try, deliberately, to get out of step with what we call 'progress' ". A fourth subject also mentions a deliberate distancing from others, associated with an alienation, as his explanation for his experience of time being different from that of others around him. None of the eight subjects claimed to be influenced by a culture other than Canadian or American. So, any differences in the experience of time cannot be explained by an obvious cultural difference.

Two subjects mention the phenomenon of being out of step in time with themselves-one with himself earlier in his life, and the other now. The latter describes herself as having one foot on the accelerator and the other foot on the brake, as being both slower and faster than herself. She thinks that her natural pace is fast, and the brake feels like some external control.

When asked "What symbol or metaphor is representative of time for you?" three subjects responded with images that are directly related to the measurement of time. One said, "sand falling through an hour glass too quickly". This image suggests an attitude that time is running out and moving too fast. In fact, he volunteered, "There's never enough time to do the things I want to do". The other two drew the round face of a clock. Both indicated "hours" on the face, one with lines, the other with numbers. However, both omitted hands on the clock. One commented, "That's because it's not a particular time". This symbol suggests the circularity of time, it's tendency to recur in regular cycles and its measurability.

Two subjects drew abstract symbols to represent time. One was a spiralling continuum moving inward. This suggests a spinning in time, a circularity and cyclicity, as well as a directionality. She mentioned, in reference to this symbol, that she has felt suspended in time over the past few years. The other abstract symbol was a series of loops described by one continuous line, curving back around to form a circle. This symbol also suggested cyclicity-cycles within a cycle.

The remaining three subjects described, in words, symbols that are organic or at least changing or growing. One used those very words, "a growing organism such as a tree, or a river bed, developing and changing". This suggests time as an integral part of living, as connected to biological processes. Another subject described time as

being like "a wave which gives the illusion of movement but the individual particles move very little". She goes on to say, "Time gives the illusion of change, but much remains the same. Clocks give us the illusion of control over things. We don't have any control really." This description suggests the relentless power of time, its illusory nature and our powerlessness to affect time in any way. The eighth subject chose to describe time as "a lovely gift, a substance like warm plasticine, stretchable, shapable, colourful. It is meant to be played with, although sometimes it feels like hard work". By contrast, this symbol suggests the power she feels to shape and change time, to use it for her own purposes.

Conclusions on the Theme

This theme will be concluded with a summary of the general attitudes towards time of the eight subjects in this study, beginning with those who seemed the least at ease with time and ending with those who seem most comfortable with time. Two subjects seem to regard time as an enemy, an external force that is hostile or at least indifferent to their needs. Both agree that time moves too fast and both volunteered that they don't wear a watch. One said he resents the limitations or restrictions time places on him. He prefers to be able to follow spontaneous impulses. "Time manipulates you. I don't believe I should be constantly manipulated." He mentioned that he thinks of time as more cyclical than linear, but all the images he used are linear. The other has a strong feeling of being out of rhythm with clock time. He said that time is "a rather hostile external force, a disembodied, disinterested factor in reference to human existence", and occasionally his enemy. He seems to express his rebellion against clock time by often losing track of the time and even the day of the week. He sees the need to be aware of clock time as associated with responsibility to others. His view of time seems to be basically linear. It is interesting to note that both subjects believe that their personal time ends with death.

A third subject, rather than resenting time, expressed a desire to be outside time. He is aware of the vastness of his personal time-thousands and millions of years. He feels he can choose where he wants his awareness to lie and has had "wonderous" experiences outside time. He said we feel comfortable with time because "in the worlds of time and space it is ingrained that we must have time and we fear getting outside it because of our inexperience". But, he is not afraid and is drawn to the planes outside time and space. In contrast with the first two subjects, he is impatient "to hurry it up". He has "a desire and urgency to continue, to move it along".

He has a cyclic rather than a linear view of time.

Three subjects feel strongly that time is a concept which is imposed on us as we are socialized in Western culture. Two suggested that they haven't quite moved beyond that view yet, although both seem to be aware that there is more to time than its measurable form. One said that although she is not consciously aware of time passing, she feels limited by how society is regulated by time. "I haven't transcended that." She feels it is important to be on time for appointments and resents schedules. She suspects that there is something emotional about time and "I have a lot of difficulty speaking emotions". She has a hard time breaking out of the linear concept of time. "It was imposed so successfully." A second said that a linear view of time is natural for her. "We are educated to think of time that way-one thing after another. I know it isn't like that, but that's the way I think about it a lot." She has an awareness of another view of time because she mentions "the past, present, and future all being here together all the time in different amounts". She feels time is an incredibly strong illusion, that there is no such thing as the clock ticking away, and that we have no control over time. The third said that time is an artificial construct that is taught in our culture, and that we "use it until we don't need it anymore". Since a life-threatening event a few years ago he has been aware of his responsibility for how he uses his time. "It became more valuable. I had a sense of taking charge of my life." As a part of the change in his view of time then, he is moving from a linear to a cyclical view of time.

Two subjects seem to have a basic ease or compatibility with time. One of them expressed a comfort with and gratitude for time, although she claims to be out of touch with time, or at least not very often conscious of time. "I just kind of move along through it." She feels she is in a "time out" period now. This is a time to relax and retreat rather than struggle with a sense of urgency. Sometimes, such as when she has an appointment, it is important for her to be oriented to clock time. However, she is naturally free with her time, preferring to linger, absorbing what is happening. Her one struggle with time is an internal one, concerning two "paces" she seems inclined to follow. This ambivalence about her personal pace seems to leave her at odds more with herself than with "time". She seems to experience time linearly and circularly at the same time. Although the final subject mentioned that time moves too fast, especially as he gets older, he expressed the desire to "cooperate with the process with equanimity and some humour". He seems at ease in his relationship with time. He said that time is a resource that he enjoys using. Time is important to him and he is

concerned with filling his life with quality time. He likes to know the time, and punctuality is important to him. He also believes that time is of this worldly reality, and will not exist in other realities. He has experienced a sense of freedom in association with "a blending of the past, present and future. . .into an ongoing present". This has given him a hint of the experience of timelessness. He incorporates both linearity and circularity in his view of time.

It is clear that attitudes and feelings towards time vary widely. Time is seen as a hostile enemy, and as a resource that has gift-like qualities. Those subjects with a more neutral attitude seem to view time as an imposed concept which they can choose to live with, or transcend.

Attitudes to Death

Aspects of the Theme

This theme encompasses death as an aspect of time. Is death considered to be the end of personal time or is there a belief in something to follow death? Has the subject even considered his or her own death? The stimulus words "death" and "immortality" would yield attitudes towards death. Some questions on the interview questionnaire relate directly to this topic; for example, "What do you believe follows death?".

Assumptions and Expectations

It was expected that most subjects would have an emotional response to the topic of death, such as fear, while others might look forward to a peace following death. Some might not have thought much about their own death or might repress any thoughts they have had. Some subjects might believe that death marks the end of their personal time and might therefore fear death more than those who believe in "something" beyond death. Those who believe in life after death or multiple existences might be considered to have an extended view of their personal time.

Results on the Theme

Four of the eight subjects believe that death is "final", that there is nothing after death. Two of them expressed their disbelief in existence beyond death as a lack of interest or belief in immortality of the soul. A fifth subject said, "I don't think I

know. It's speculation. But the images are exciting and have to do with greater fulfillment." This suggests he is attracted to a belief in life beyond death. Three subjects, with varying degrees of certainty, said that there is something beyond death. One said, "Yes, a going on to I'm not sure what. There must be something beyond death, something more to make this all make sense-a joke, some perfection that we don't see." Another said, "There will be something", although I have difficulty picturing it". He thinks it will be something completely outside his present realm of understanding. The final subject is filled with conviction. He stated, "Immortality is a reality". His belief is that we will go on to multiple existences on many different planes, and that our souls continue for thousands and millions of years.

When the data in this study were examined for general thoughts and feelings which are associated with death, several themes within the theme emerged. What the subjects said will be reported under these subthemes. Several subjects displayed an ambivalence towards death, as if it were two opposing forces within them. One said, "Grim reaper? Angel of mercy? I don't know". Another mentioned "angel and demon-two faces of the same reality". A third admitted to "opposite and conflicting reactions: the end and the beginning, conclusion and new opportunities".

Two subjects avoid thinking about their deaths, but for very different reasons. One believes we create our own futures by thinking about them, so he "hasn't given his 'translation' from this lifetime much thought', since seeing it would be creating it. The other admitted he avoids thinking or talking about it. "I never took the time to look inside that box" (death). This is because he "fears the reality of his death, and the quickness with which it comes". He expressed other strong negative feelings about death. "The thought of death abhorres me. It's a waste. I respect the finality of death."

Several other subjects expressed negative feelings towards death or the dying process. One associates death with anger, regret and fear for "my own mortality, my unfulfilled dreams". He dreads the pain of physical death. Another said, "I fear the dying process if prolonged". Another said it troubles him although he wouldn't say he fears it. Yet another said she feels threatened by what she expects to be an early, unnatural and sudden death. "I have fear of it." Several mention that death is a "waste" or a "loss" and that they are not ready for death. One subject, as if in contradiction to his not being ready, says, "I am looking forward to my death". He is wanting the opportunity to experience a "good death", involving the chance for "incredible growth". Another subject who also expresses her resistance to death sees

death as a release: "mostly a merciful friend who will help me escape from a worn-out body". There is an element of acceptance and even anticipation in these comments.

Some other subjects express a fascination with death which often contradicts other feelings they express. One says he has a "morbid curiosity with the trappings and customs surrounding death", and another says she has been obsessed with death lately. Another, who says she has accepted death, mentions being curious about it. Another, because of his belief in immortality of the soul, says he doesn't see death as a negative thing.

Several of the subjects have obviously given death much thought and have "worked" at integrating death into their living. Some reduce death to a finality or an illusion. However, others acknowledge the importance of death to quality of time in this existence. One said, "A recognition of the basic nature of existence (life-death-resurrection) is necessary for sanity, growth, health and maturity". Another said, "I am working hard towards accepting it". Two subjects volunteered that they have given considerable thought to their own mortality, what follows death and the meaning of death. All of these subjects who expressed the thoughtfulness they have dedicated to the subject of death mentioned that we experience death within our daily lives. "We deal with death on a daily basis. We have to let go of something in order to acquire something new." "We experience small deaths as we live, for example, loss of relationships." Two symbolized many deaths along the line that represented their lifetime on the Lines Test. One subject mentioned two specific experiences in his life that felt like "the Christian experience of dying and being raised". Still another mentioned "death in life" which she said was "when you are dying but are still alive". A final subject feels he has experienced death many times already in other existences. Because of this experience with death, he no longer fears death.

Conclusions on the Theme

Four subjects reported that they believe something will follow death for them, or as in one case, entertained the possibility of existence beyond death. Four declared that death marked the end of existence for them. As was expected, most subjects reported an emotional reaction to the prospect of their own deaths. The exception was the subject who expects multiple existences and who feels he has undergone many physical deaths already. He claims that this experience with death has relieved any negative feelings he might have otherwise held.

Most subjects, regardless of their belief in an existence after death, harboured some fear or dread in reference to death. However, among those who saw death as a finality, the negative emotions expressed such as "abhorrence, obsession, and threatening", were stronger. Several of these subjects applied the word "waste" to death. Those who expected something to follow death mentioned fear of the dying process rather than of death itself. They were also more likely than the subjects who saw death as final to mention positive emotions in reference to death. They used the terms, "release, looking forward, intrigue, and opportunity for incredible growth." One who expected death to be final mentioned his curiosity in reference to death, but described it as "morbid". Two subjects from each group mentioned ambivalent or conflicting feelings and thoughts about death. Those who expected something following death tended to have given death, in general, and their own deaths, in particular, more thought. They also were more likely to have arrived at some degree of acceptance of their own death. The phenomenon of experiencing small deaths within their own living was mentioned by all but two subjects, both of whom expected death to be final. So, in general, the quality and quantity of associations, thoughts and feelings regarding death seem to be higher for those subjects who have a belief or expectation of some existence beyond death.

Religion or Spirituality and Time

Aspects of the Theme

This theme encompasses any influences on time experience that might have their source in religious beliefs or in spiritual disciplines. Does the subject identify with a formal religion? Do disciplines associated with religion or spirituality, such as prayer, contemplation, and meditation, alter in any way the subject's perception of the passage of time, or affect his or her attitudes towards time? Two interview questions relate directly to this theme. One asks, "Do you consider yourself a religious or spiritual person?", the other, "Do you meditate, pray, or otherwise communicate with God?".

Assumptions and Expectations

It was expected that religious beliefs might influence attitudes towards time, particularly those about the finiteness of time. Some faiths adhere to a belief in an existence of the individual beyond death, and some in reincarnation. Religious

teachings might also shape the way a subject views universal time. Disciplines associated with religions, such as prayer and meditation, are reported to alter perception of the rate of passage of time. It was expected that subjects who follow such disciplines might have experienced a change in time's passage. It was expected that most subjects would answer "Yes" or "No" to the question about whether the subject considered him or herself to be religious or spiritual. However, the option existed for a subject to reply "Yes" to religion or spirituality, and not both.

Results on the Theme

When asked their religion on the Personal Data section of the Questionnaire on Time two subjects responded "None". One other crossed out the word religion and wrote: "I follow the path of Eckankar, the ancient science of soul travel". The others listed themselves as: "R. C. with a Bahai instigation underway, Jewish, Presbyterian, nominal Baptist (Christian at least), and Protestant".

However, when asked during the interview, "Do you consider yourself to be a religious or spiritual person", only two people answered "Yes". What is more, both of them question their affiliation with organized religion at present. One has been to church two times in seven years. She left because of the "politics", but carries on her worship in private. The other said, "Recently. . .the church has lost its relevancy. I don't want to go to church, read the Bible, pray or talk about religion". So, by their own standards they are religious. However, this in no way suggests they are religious by any outward standards. By answering "Yes", these two subjects were indicating they are spiritual as well. Both meditate regularly. One reported she "prays instinctively when she wakes up". The other "reads, thinks and prays every morning early".

Three other subjects answered that they are spiritual but not religious. One of these subjects seems to base this distinction on his not defining Eckankar as a religion. The teachings of Eckankar are clearly very important in shaping his belief structure, apparently more important than the teachings of the religions of those subjects who call themselves "religious". In fact, often when asked to refer to his personal experience, he responded with these teachings. Because of his adherence to a code, if external standards had been used, this subject might have been classified as religious. He practices the discipline of contemplation as taught by Eckankar. The second offered his distinction between religion and spirituality. He suggested that religion (man

striving to reach God) is the enemy of spirituality (God reaching to man). He practices meditation "pretty regularly". The third said he is not religious because he had no concept of a deity and no fixed beliefs in the form of scriptures. He describes himself as "strongly spiritual". He doesn't see the spiritual aspects of his life as divorced from the practical. He meditates from one to one and a half hours per day, using a Buddhist technique.

The remaining three subjects answered, "No" when asked if they considered themselves to be religious or spiritual. One, in spite of presently considering joining the Bahai faith, says, "I'm not a very committing person. . .I don't believe in a God-given code". The second associates a creative "spark" with spirituality, admires it, but said he doesn't have it himself. The third said that she does have a concept of an external God that is left over from her childhood. None of these three practises any discipline associated with a religion such as prayer or meditation.

Conclusions on the Theme

The data were examined to determine if subjects who answered the question, "Do you consider yourself a religious or spiritual person?" in a similar manner tended to describe their experience of time in a consistent way. For simplicity in reporting conclusions, those who answered "Yes" to this question are referred to as "religious", those who answered "No" are referred to as "non-religious", and those who differentiated, saying they were spiritual but not religious, are referred to as "spiritual".

As was expected, there was a tendency for subjects who declared themselves to be religious and/or spiritual to practice disciplines such as prayer and meditation. All three "non-religious" subjects said they don't pray or meditate. Both "religious" subjects meditate regularly and pray every morning. The three "spiritual" subjects contemplate or meditate, one "pretty regularly" and the other two daily. Three of the five meditators report an alteration in their perception of the time passing while they meditate. Clock time passes much more quickly than they experience it at the time. Paradoxically, one subject reports that it can feel like he has experienced a month or a year in this seemingly short time. One of the other two meditators says he remains aware of how much time has passed while he meditates, but he has "come to expect it to seem to go quickly". This suggests he has accustomed himself to the change in his perception. Another meditator mentions no change in her perception of the time that passes while she meditates.

All three "non-religious" subjects believe that death marks the end of their personal time. Two of them have a more extended view of universal time; the other has a condensed view of universal time as well as of personal time. All three "spiritual" subjects believe in, or at least speculate, that there might be, past and future lives for them. Two have a very expansive view of both personal and universal time, the other a rather narrow view of both personal and universal time. One "religious" subject said death is final while the other is expecting something to follow death. The subject with the shortened view of personal time has a more expansive view of universal time; the one with the extended view of personal time has an even more expansive view of universal time. For these subjects not being religious and/or spiritual is associated with an expectation that this lifetime is all the time they have (a condensed personal time) but not necessarily with a condensed universal time.

There is some consistency in the feelings towards time expressed by the "non-religious" subjects. All three express resentment or annoyance over the limitations or restrictions that time places on them. This may be because they expect to have less time than the others. The three "spiritual" subjects have very different feelings about time. One wants to hurry it along; he is attracted to his experiences outside time, and anticipates more "wonderous" experiences in the future. Another thinks time is an artificial construct programmed into us in Western culture, and that we use it as long as we need it. He is now experiencing time as more "valuable" than in the past. The third subject also has had pleasurable experiences of time shifting to "an ongoing present". He, however, sees time as of this reality and views it as a resource he enjoys using.

The two "religious" subjects had even more divergent attitudes towards time. One regards time as an illusion, something we are educated into, and over which we have no control. The other claims to have a comfortable relationship with time. She sees it as a gift. She moves along through it. The conflict she identifies is not with time itself, but an internal one between two paces she experiences within herself-"one foot on the accelerator, the other on the brake".

A pattern seemed to emerge when responses to the question , "Do you consider yourself to be a religious or spiritual person?" were compared to orientation to the time zones. The "non-religious" subjects were oriented to the present, the past and a combination of the present and past. All three "spiritual" subjects were oriented to a combination of the present and future. The two "religious" subjects contrasted with each other again. One was oriented to the present and past, the other to the

present and future.

When relatedness of the temporal zones was compared to the self-description of religiousness or spirituality, there was some consistency. All "non-religious" subjects seemed to perceive a minimal relatedness among the time zones, that is, they experience the past, present and future as separate. On the other hand, the "spiritual" subjects all viewed the temporal zones to be interconnected, two of them very strongly so. There was some difference between the responses of the two "religious" subjects. One perceived a strong interconnectedness among the time zones. The second made no direct comments about her perception of the connectedness or separateness of the past, present and future. Her symbols indicated mixed perceptions.

When linearity versus cyclicity of time perception, and incidence of unusual experiences of time were examined, no consistent pattern emerged among the "religious", "non-religious" and "spiritual" subjects.

Unusual Experiences

Aspects of the Theme

This theme includes any elements of the experience of time which the subject considers to be out of the ordinary. At the end of the Questionnaire on Time subjects were asked to "think about any experience you have had in your lifetime involving an alteration in your perception of time, for example, a change in the rate of passage of time, a deja vu experience, or a precognitive experience" between then and the interview. During the interview subjects then volunteered any experiences of time that they considered an alteration from the normal, or any unusual perceptions of time.

Assumptions and Expectations

It was expected that most subjects would have experienced time speeding up and slowing down under different circumstances. It was also expected that most subjects would have experienced time moving more quickly as they got older. So, these experiences were not necessarily classified as unusual. Deja vu experiences were expected to be familiar to some of the subjects, and the content of the experience was expected to be vivid. Precognitive experiences were expected to be less common but familiar to a few of the eight.

Results on the Theme

Contrary to expectations, only one of the eight subjects mentioned that he experiences time moving more quickly as he grows older. He is 36 years old. Since this question was not asked directly, other subjects may have experienced this phenomenon but not reported it because they don't consider it unusual.

Subjects were asked, "Have you ever found yourself in a situation which, although new, felt like you had experienced it before, that is, a deja vu experience?". Only one subject said "Nothing comes to me". Another said, "Possibly-with some people the meld is so quick, it's almost like you've been there before". The other six answered "Yes", unhesitatingly. Five subjects could not recall specific examples. However, one said it happens often on trips. Another said, "There has been the odd time in conversations, usually reinforced by physical relationships in my field of vision". Another subject to whom deja vu experiences "happen often" suggested, "That's just a feeling of your past, I think". One subject who reported frequent deja vu experiences also has what she calls "double deja vu" experiences. It takes the form of "a deja vu that I had a deja vu about something. I remember going through the same emotional response as when I first was in the situation." She says that they are very intense experiences but cannot recall a specific example. In explanation of this forgetting she suggests, "The intensity wipes out the content of the experience itself".

Subjects were asked, "Have you ever had an experience of 'knowing' ahead of time about some event which later takes place, that is, a precognitive experience?". Only three subjects responded, "No". Four of the subjects who report precognitive experiences also mentioned that they are "happening more and more" or are "becoming more commonplace". Three of these also mentioned that they are "paying more and more attention to them" or "trusting that ability more and more". Three mentioned that their dreams are a source of precognition for them. The significance of the precognitions varies widely from time to time even within subjects. That is, some are of a mundane nature and others predict highly important events, such as deaths.

Regardless of the significance of the event predicted, the content of the precognition is an important part of the experience for these five subjects. One subject said that his lone experience, the appearance in reality of a scene from a recurrent childhood dream, was not spectacular in any way. "The image simply clicked into focus and we moved past it." However, the experience made an impact. "I got scared at that point because I had another couple of nightmares that had recurred and I really did not want them to come true." Other examples of mundane precognitive content

are: knowing where to find a parking place, knowing the meter reader is about to arrive, knowing ahead changes to a guest list, knowing someone will be stuck in an elevator and knowing ahead what someone is about to say. Examples given of more significant precognitions all involved death in some way. One subject saw clearly, in a dream, a building which symbolized death for her. When she travelled to Puerto Rico she saw the building. "As soon as I saw it, it jarred me. I knew I had seen it before, and I knew where." Another subject was aware of the presence of a young friend who, she later learned, died at that same time. A third subject saw, in a dream, his wife talking on the telephone and receiving news of a death. The next day they learned that her uncle had died that night. One subject who reported frequent precognitive experiences prefers not to talk about them because he fears he will "lose them" if he shares the details.

So, five of eight subjects have had what they classify as precognitive experiences. The experience itself makes an impact only in retrospect, after the event predicted has taken place. Unlike a deja vu experience, the content of a precognitive experience is memorable to the subject, often in vivid detail.

Subjects were asked, "Have you experienced any other alterations in, or unusual perceptions of, time?". One subject answered, "No". Another said, "No, other than an extreme tendency to lose track of time-the hour of the day and the day of the week". One subject referred to the phenomena of time passing at dramatically different rates and of time standing still for him. Another also mentioned he has experienced time standing still when meditating. This feels "like moving into another state of consciousness briefly", and produces "a high, high energy". Still another said that "time doesn't behave. Sometimes a minute is eternal/timeless, sometimes a big chunk of time feels cramped in a box or under a thumb".

Several subjects referred to the coming together of two or more of the temporal zones. One referred to what he described as the "collapsing of time", the coming together of the past, present and future. This gives him "an incredible feeling, mental sensation and physical response". He said it was like stepping into time, whereas most of the time we are outside it. One subject described a sense of knowing in the present which seems to be connected with the past, "a mind-to-mind communication without words". Similarly, another referred to "experiencing new truths in a way that feels like the present and past coming together". Another subject described a feeling of "spiralling through time, inward towards the centre". She moved by flashes of her past, towards the future. It felt like a death experience to her.

Two subjects mentioned that they desire more unusual experiences of time. One regrets that she has had no "psychic" experiences and wants them to come naturally, "without taking drugs". Another who has had many unusual experiences, although he wouldn't share specific details, has the desire for even more. For example, "Being in any number of places at the same time, and instantaneous travel are things I'm shooting for".

Conclusions on the Theme

There was an unexpectedly high incidence of deja vu experiences and a surprising inability on the part of most subjects to describe the content of a particular incident. Six of the eight subjects answered, "Yes", without hesitation when asked if they had ever had a deja vu experience. This is clearly a familiar experience. However, five subjects could not recall specific examples. As if speaking for all six, one subject said, "They are very intense experiences, and the intensity seems to wipe out the content of the experience."

Even more surprising was the high incidence of precognitive experiences among these eight subjects. Five report having had precognitions, sometimes in the form of dreams. Often the foreknowledge is of a mundane nature. The content of precognitions is far more important to these subjects than the experience itself. It is memorable, often in vivid detail. In fact, the experience itself makes an impact only in retrospect, after the content of the precognition has taken place.

Several other unusual perceptions of time, or alterations in time reported by subjects are summarized below:

1. Extreme tendency to lose track of time.

2. (two subjects) Time standing still, moving into another state of consciousness.

3. (two subjects) Time moving at dramatically different rates.

4. (several subjects) The coming together of two or more of the temporal zones, collapsing of time accompanied by an incredible mental sensation and physical response.

5. (two subjects) A sense of knowing in the present which seems to be connected with the past.

6. Spiralling through time.

In addition to these experiences are those of one subject who said he had many unusual experiences which he was "charged to keep under wraps" or else he

might lose them. Several subjects expressed a desire for even more unusual experiences in regard to time.

Meaning of Time

Aspects of the Theme

This theme covers the cognitive aspects of time: the definition the subject gives to time, any symbols or metaphors used to represent time, any experiences associated with the meaning of time. This theme contrasts with the earlier theme "Attitudes to Lived/Clock Time" in that the former reflects feelings rather than thoughts. Subjects were asked directly to give a definition of time and to suggest a metaphor or symbol that represented time for them. The stimulus word "time" might elicit statements about meaning. In fact, any part of the questionnaire or interview could contribute to this theme.

Assumptions and Expectations

It was expected that the concept of time would be difficult for subjects to define because of its abstractness. However, it was assumed by the researcher that time would have some meaning for each subject. The articulation of that meaning would present difficulty because of the limitations of language available to describe different aspects of time. It was also expected that time wouldn't be expressed as a unitary concept, and that this might lead to contradictions and paradoxes in definitions of time.

Results on the Theme

Three basic responses were given when subjects were asked for a symbol or metaphor to represent time, each reflecting a separate truth about time: (a) as measurable, (b) abstract symbols, and (c) as growing, organic.

Three subjects represented time as measurable. One used the symbol of "an hourglass with the sand falling through too quickly". Two subjects symbolized time as the round face of a clock. Interestingly, both drew it with marks for the hours of the day, but without hands.

Three subjects offered abstract symbols for time. All were loops or spirals. One drew "a spiralling continuum moving inward" and wrote on it, "As the future becomes the present and then the past, so too does the past become the present and the

future". Another subject drew a series of loops in a line which curves back around to form a circle. It suggests cycles within the larger cycle of time. A third subject drew two symbols. One was a single loop about which she commented, "life is supposed to be (full circle)". The other is a rising spiral about which she said, "life may be (upward and onward unevenly)".

As if to indicate the inadequacy of a single symbol, this same subject also offered several descriptive metaphors for time: "a lovely gift, warm plasticine, rocks across a stream, harmony, a tempo, something to measure ourselves by". Another subject used two picturesque metaphors for time. One was, "a growing, changing organism such as a tree or plant or a changing state of something like forming rock". The other was, "a chain which has a linear form to it, but is made up of interlocking pieces". A third subject also offered two metaphors for time: "a wave which gives the illusion of movement but the individual particles move very little, or an inflatable, all lumpy and bumpy, of no particular shape". About her first metaphor she commented, "Time gives the illusion of change, but much remains the same".

Subjects were asked to define time during the interview. The comments the eight subjects made were so rich and diverse that the researcher's efforts to group responses into themes or topics seemed to reduce and distort the material. So, responses will be clustered only as definitional or as descriptive, that is, comments about time.

Definitional Responses

Time was defined in a different manner by each subject: Time is "a progression, a direction (not necessarily always upward--you can retreat, go ahead); phases (everything has a season--my life has had winters, summers)". Time is "The passage of events in the lower worlds. It has a different meaning on different planes. Perception of time is dependent on the passage of events (not necessarily physical events, but thoughts and feelings too)". Time is "a framework in which I live and act. . .an artificial construct taught in our culture (we use it until we don't need it anymore)". Time is "an illusion; it gives the illusion of change, but much remains the same. . .a system of measuring happenings and of keeping control over things. The control is an illusion". Time is "what life runs along. . .what we live our lives in. . .a way of marking the process of life". Time is "what we live in. It is the medium that gives me a sense of identity, a sense of continuity. It is a continuum. We can only exist in time. Only in relationship can we conceive of being. Time is a relationship

with something else. In this reality, time is everything."

Descriptive Responses

Some of the descriptive comments subjects made about time follow: Time is "related to motion." Time is "paradoxical, each moment is an eternity, yet each goes by very quickly". Time is "rich". Time is "not money. . .It is expendable, expandable, useable. . .It is marked by the sun. . . It is measured in little static chunks. . .It is comfortable to have time". Time is "a subjective experience. There is an inner time the experience of which is unique for the individual. You cannot describe it to somebody, define it, without taking them out of it. We are in time."

Conclusions on the Theme

When asked, "What symbol or metaphor is representative of time for you?", responses separated roughly into three equal categories: (a) symbols that represented time as a measurable entity, (b) abstract symbols that seemed to represent the subject's experience of the flow of time, and (c) picturesque, often organic metaphors that made a statement about the nature of time.

When all definitions and descriptions are considered the multi-faceted nature of time is evident. There is little consistency or repetition in the definitions and/or descriptions offered by the eight subjects in this study. Each subject attaches a different meaning to time. However, several threads could be picked up:

1. The linear nature of time is mentioned, it's moving forward. Words used that suggest this are: progression, direction, motion, passage, phases.
2. Time is defined as a framework or construct.
3. It is also referred to as a trick, illusion or paradox.
4. Time is referred to as a measurement system, and as a means for keeping control over things.
5. Time is called a medium that we live in, what life runs along. "We are in time.
6. Time is reality. It gives a sense of identity and of continuity.
7. Time is described as desirable (rich, comfortable to have time).

General Conclusions

The phenomenological research method chosen to carry out this research made possible a freedom for each subject to express his or her unique experience of time. Because of the abundance of the data yielded by the questionnaire on time and the tape recorded interview, even after careful editing and condensation, the results could only be highlighted within the bounds of this thesis. Contrary to the researcher's expectation that the experience of time would be difficult to articulate, subjects shared abundantly and profoundly their thoughts and feelings on the topic. Many mentioned that they had thought about time but had rarely talked about it. The challenge for the researcher was to bring order to this wealth of subjective data. The identification of seven themes or topics within the study helped to classify information. It is evident from the quality and quantity of the data resulting from this study that the experience of time is an important one for these eight subjects.

The most salient features of the results of this study are the richness and diversity of meaning expressed by the participants. The experience of time can be concluded to be a highly individual experience. Conclusions pertaining to individual subjects can be found in Chapter IV under the heading "Summary and Evaluation" at the end of each section of the subject by subject reporting of results. Within themes there was variable internal consistency. Conclusions pertaining to each theme can be found in this chapter at the end of each section pertaining to the specific themes. So, conclusions pertaining directly to individual subjects and to the seven themes can be found elsewhere. The conclusions that follow constitute a summary of the commonality in the experience of time as reported by the participants in the study.

1. Time is important to these subjects.

2. The meaning attached to time is diverse, not only among subjects, but within individual subjects. Most subjects expressed an awareness of time as measured. Some expressed this indirectly, in images or symbols of timepieces. Others gave abstract symbols such as spirals, which suggest cyclicity and flow, to represent the meaning time has for them. Some represented time as changing, growing, moving or maleable. The latter suggest that it is an integral part of living, connected to biological processes.

3. Society's time is important to the subjects in this study. Quantifiable time, as measured by a clock or a calendar, has a powerful influence over everyday living. Several subjects see clock time as imposed very successfully by western society and associate it with responsibility to others. Time as measured by a clock becomes an agreed-upon reality. This aspect of time is connected with appointments and schedules. Some rebel against the control imposed by "society's" time. One reported she tries deliberately to get out of step with "what we call progress".

4. All subjects report that they have felt that their time is different from that of others around them, at least part of the time. "Marching to the beat of a different drummer" was the cliche used. One mentioned that her pace is faster than that of others, and that this results in an impatience with them. Another said that his time is slower than his wife's. He experiences a stammering in relation to time. A third has noticed that her time is very different from that of the children she teaches. She also pointed out that they seem to be oriented to the present and the future. They have "no past". Another subject mentioned feeling out of step in time with herself. This implies a difference between two or more internal paces.

5. Most subjects stated that the rate of passage of time changes dramatically for them under different circumstances. The basic rule seems to be that time is perceived as speeding up when one is enjoying oneself and as slowing down when one is dreading or not enjoying something. Some specific factors mentioned which make time seem to go faster are: being intensely involved, being in an ideal condition, being under threat of a deadline, being in a state of dread, or waiting for something desired. Some circumstances and conditions which make time seem to go more slowly are: concentration in the absence of intense involvement, waiting, especially waiting in uncertainty, enduring something unpleasant, and dreading something. As one subject said, "Time just won't behave". It is clear that stress or crisis can affect the rate of passage of time perceived by an individual. Three of the five meditators in the study report an alteration in their perception of time passing while they meditate. The most experienced meditator in this study remains aware of how much time passes, but "has come to expect it to seem to go quickly".

6. Death had been given considerable thought by these subjects. Most report an emotional reaction to the prospect of their own death. Feelings and attitudes towards

death varied widely. Several displayed an ambivalence towards death. Others expressed negative feelings towards death-fear, dread, anger, regret, abhorrence. Even some with negative feelings expressed a fascination with death. Others see it as a release, a chance for growth. One is looking forward to a "good death".

Many spoke of the importance of integrating death into their living. Several who expressed a deep thoughtfulness on the subject of their death mentioned experiencing small deaths within daily life, such as letting go, losing relationships. This "practice" with death has helped them overcome fear of dying.

The single most important variable connected with the attitudes subjects hold about death seemed to be whether they expected any existence beyond death. Half the subjects believe death is the end of their personal time; half expressed, with varying degrees of conviction, the belief that there would be something beyond death. The latter group expressed more positive emotions in relation to death. The negative emotions they expressed were directed at the dying process rather than at death per se. They have given death in general and their own deaths in particular more thought. They are more likely to have arrived at some degree of acceptance of their own death.

The majority had an age in mind at which they thought they might die. In other words they carry with them a fairly clear notion of how much lifetime they have left. The quantity of time each individual expects to have, perceived as one's allotment of personal time, varies widely.

7. Quantifiable time takes on a variety of meanings for these subjects. Most saw universal time as expansive, although half the subjects believed universal time does have beginnings and endings. Only a few saw their personal time as expansive. These were subjects who believed in life beyond death. Two who believed in the finality of death equated their lifetime to time. This might be called an egocentric view of quantifiable time.

8. There is a difference among subjects in orientation in time, that is, in the temporal zone or zones to which the individual is attracted. Two subjects were oriented primarily to the present. For two others the present was very important, but the past was also a powerful force in their lives. The remaining three placed an emphasis on the present, but were heavily influenced by the future. Feelings and attitudes towards the past, present and future vary widely. There was no consistency other than the present having elicited mainly positive feelings. The past and the future drew reports

of a wide variety of both positive and negative feelings.

9. Attitudes and feelings towards time vary widely. Some subjects expressed resentment over the limitations, restrictions, or even manipulations imposed on them by time. Some even see time as an enemy, a hostile or at least indifferent external force. Some attribute relentless power to time. One method subjects used to cope with these resentments was to lose track of time. Other subjects expressed their gratitude for time. It is seen as a gift, it is meant to be played with, and it is a resource that another subject enjoys using.

11. Being religious or spiritual has a profound effect on feelings and attitudes towards time and death. All three who answered "No" to the question of whether they consider themselves to be religious or spiritual ("non-religious" subjects) believe that death marks the end of their personal time. These same subjects didn't necessarily have a condensed view of universal time. These three were the subjects who expressed most strongly their resentment over the limitations, restrictions and manipulations they suffer at the mercy of time. Three subjects indicated they were spiritual but not religious ("spiritual" subjects). All believed in, or speculated about existence beyond this lifetime for them. Two have very expansive views of both personal and universal time, the other a rather narrow view of both. The feelings they expressed about time were quite positive. One wants to hurry it along because he expects wonderous experiences in the future. Another is seeing time as more valuable than he did in the past. The third sees time as a resource he enjoys using, and has had many pleasurable experiences of "an ongoing present". The two who answered "Yes" to the question of whether they are religious or spiritual ("religious" subjects) showed no consistent patterns. One believes death is final, but has a more expansive view of universal time. She feels controlled by time. The other has an extended view of universal time and very positive feelings towards time. She enjoys it as a gift.

Another pattern emerged in relation to orientation to the temporal zones. The "non-religious" subjects were oriented to the present, the past and a combination of the present and past. All three "spiritual" subjects were oriented to a combination of the present and future. The two "religious" subjects contrasted with each other again. One was oriented to the present and past, the other to the present and future. Perceptions of interconnectedness of the temporal zones showed a pattern as well. "Non-religious" subjects perceived a minimal relatedness among the time zones; the

"spiritual" subjects view the three temporal zones as interconnected. Again the "religious" subjects differed.

On the whole the "spiritual" subjects in this study seem to have more favourable feelings and more positive attitudes towards time. They have a more integrated view of the past, present and future and a more future- oriented stance in time, as well as the hope of existence beyond this lifetime.

11. "Unusual" experiences in regard to time are not that unusual. At least six subjects have had deja vu experiences. Five could not recall specific examples. The intensity of the experience seems to have made more impact than the content. Five have had precognitive experiences. Four said that they are happening more and more. Dreams are a source of precognition for three of them. Some are of a mundane nature, others of a highly significant nature, such as of a death. The content of the precognition is an important part of the experience for these five subjects. It is memorable, often in vivid detail. In fact, the experience itself has impact only in retrospect, after the content of the precognition has taken place. Several subjects mentioned that they are increasingly listening to and trusting their precognitions. Other "unusual" experiences were reported by these subjects: time standing still, time slowing down and speeding up dramatically, the coming together of two or more temporal zones, a collapsing of time, a stepping into time, spiralling through time with scenes from her life flashing before her, a sense of knowing the present which seemed to be connected with the past. Several mention the desire for even more unusual experiences in relation to time.

12. A "healthy" relationship with time can be identified. Two subjects seemed to have a basic ease and compatibility with time. One expressed a comfort with and a gratitude for time, even though she says she is not often conscious of time. She says she is granting herself a "time out" period now. The other sees time as a resource he enjoys using. He wants to cooperate with the process of time passing with equanimity and humour. He is concerned with filling his life with quality time. Both of these subjects have had unusual experiences in relation to time, including significant precognitive experiences. One claims to be religious, the other spiritual. Another subject mentioned the <u>value</u> he attached to time increasing a few years ago when he experiences a life threatening crisis. He became aware of his responsibility for how he uses his time. This too would seem to be a "healthy" attitude towards time.

13. Cottle's (1976, 1977) instruments used for this research, the Circles Test and the Lines Test were valuable. They are elegant in their simplicity. They are easy to respond to and yield a wealth of information. Although the results yielded on both tests were not used or interpreted strictly as Cottle intended, some of Cottle's assumptions about the parameters measured by these instruments could be evaluated. Anecdotal and other projective information collected in this study pertain to the same topics, or example, the temporal zone that is most important to the subjects or the expanse of the subject's lifetimes. When results on The Circles Test and the Lines Test were compared to data collected by other means, one of Cottle's assumptions regarding the Lines Test was not supported. One pertaining to the Circles Test was supported, and another not supported. This comparison provides a means of assessing the validity of the two instruments and suggests the need to clarify what these instruments measure.

Subjects did not, as Cottle expected, respond to the Lines Test by dividing the line representing time in a manner that would reflect the time the subjects had lived and had left to live. Rather they seemed to respond more subjectively and in a manner more consistent with their attitudes towards the temporal zones and their expectations of personal and universal time. On the Circles Test, subjects are invited to draw circles representing the past, present and future. Cottle assumes that subjects will draw largest the circle representing the temporal zone that is most important to them. When other results in this study were compared to the results on this test, the assumption was not upheld. On this same test Cottle expects subjects to interconnect or overlap the circles in a manner that represents the relatedness the subjects perceive among the temporal zones. When the results were compared to anecdotal material, this assumption was upheld. Further research is needed to determine precisely what these instruments measure.

15. This study has implications for therapy and education. It also raises many questions for further research.

Contributions of the Study to Therapy and Education

This study demonstrates the variations that exist in the experience of time among these eight adult subjects of reasonably consistent educational and economic

level and cultural experience. Clearly, treating time as if it were a unitary concept could lead to serious misunderstanding, even among these eight individuals. There is an even greater potential for diversity among individuals separated by personality, educational and cultural factors which may shape the experience of time. Those who seek to arrive at a shared meaning with other human beings, for example, therapists and educators, must be aware of the complexity of the concept of time, of the many perspectives from which it may be viewed, and of the many attitudes others may hold towards time. It is hoped that the present research might raise the reader's awareness of the importance of time in the study of human development and in education.

Therapy and Education

Several of the contributions of this study relate directly to therapy. Therapists who wish to understand the client's view of the world must be aware of the client's experience of time: its meaning, the attitudes the client holds towards time, the rate at which the client experiences time passing, the temporal zone to which the client is oriented, the degree to which the temporal zones are perceived as interrelated, the client's expectation about the length of his or her lifetime, the client's expectation (or lack of same) regarding existence beyond death, the client's feelings about death, and the client's view of the expansiveness of universal time. All these perceptions, beliefs, attitudes feelings and stances exert an influence over the client's view of existence. More specific implications of some of these parameters follow.

Just as the therapist may need to be sensitive to the individual client's experience of time in order to enter into the client's phenomenological world, it may be the therapist's responsibility to bring into the open shared or diverse experiences of time within couples or among family members. Adolescence, as is pointed out in the literature review, is a time when the meaning and experience of time changes dramatically. It can be a particularly stressful time for families because of this and many other dramatic changes in one of the family members..

The characteristics of subjects who enjoyed a "healthy" relationship with time may suggest goals of therapy or self-therapy. For example, encouraging clients to acknowledge their spiritual needs, to practise spiritual disciplines, and to be open to "unusual" experiences relating to time, such as deja vu and precognitive experiences, have all been associated with a comfort with time in this study. Therapists must be aware that such unusual experiences are not necessarily indicative of psychopathology.

Individuals who seek therapy are often in a crisis of one kind or another: in a

state of dread, anxiety, threatened by change, feeling moved to change, suffering from a loss, or pressured to make a major decision while threatened by a deadline. Many of the circumstances which dramatically affect the pace of time, making it seem to speed up or slow down, are those which are perceived as crisis. So, a client coming to a therapist may be in a "time crisis" when he or she presents for therapy. It is likely that time passes at a very different pace from that of the therapist, and from the client's usual experience. It will be important for the therapist to be sensitive to the client's perception of the pace of time experienced, and the associated feelings about time. Several strategies which are used by therapists to help clients deal with crisis or pain, such as hypnosis or relaxation training, are time altering strategies. As long as they are matched to the client's needs they can be used effectively to expand or contract time.

Subjects in this study showed differences in their orientation in the temporal zones. A therapist can become aware of the client's orientation to the past, present or future by being alert to where his or her consciousness tends to lie. Helping the client shift orientation, even if only for the period of the therapy session, may prompt change. The client's orientation in time may also have implications for the choice of theoretical stance out of which the therapist ought to work, or for the client's choice of therapist. For example, psychoanalytic therapies focus on the past, Gestalt therapy on the present, and Existential therapies on the future.

Subjects in this study showed differences in their perceptions of the interrelatedness of the past, present and future. At times in therapy, such as when the client is dealing with change imposed from the outside, a perception of continuity of the temporal zones might be healing. However, many individuals present for therapy wanting a discontinuity between the present (or a recurrent past) and the future. Change is sought. If the client perceives the time zones to be interrelated strongly, it might be difficult to acknowledge this discontinuity. A therapist who is aware of temporal focus could help in this process.

Subjects showed differences in the length of lifetime they expected, in their expectation of existence beyond death, and in the expansiveness of their view of universal time. Therapists might choose to help a client expand the boundaries created by expectations of shortened time. On the other hand, at times it might be more appropriate to encourage a client to face the limitations that time places on him or her, in order to encourage living more fully in the present. The concept of "allotted lifetime" has implications for counselling the dying or the bereaved, whose

expectations for a particular allotment may have been shattered.

One subject spoke of the role a life threatening crisis had played in helping him take responsibility for how he used time. Time became more valuable to him. Other subjects who had given their deaths considerable thought expressed more positive feelings towards time than did those who chose to disregard the topic of death. Several also mentioned experiencing small deaths within living. All of this points to the importance of facing the reality of one's mortality and integrating death into living. Therapists might consider "death education" for appropriate clients.

There is one important implication of the study for education. One subject who is a teacher commented upon her observations that the rate of passage of time she perceives differs vastly from that of her students, and that their orientation in time seems to be different from hers as well. Time moves more slowly for the children. They seem to her to be oriented to the future and present, she to the present and past. Although her specific observations may not hold true in every classroom, teachers must be alert to the very different ways in which children and adults experience time.

Qualitative research begins with a phenomenon and explores it as it is. The goal of this type of research is not to begin with an hypothesis and proceed to prove or disprove it. Instead, qualitative research is hypothesis-generating. That is, this study doesn't provide major answers. Rather, it raises major questions and suggests further phenomena which are worthy of study. One of the ways this study contributes is to point the way to further research.

Suggestions for Further Research

Because the phenomenon of time is under-researched, there is certainly a need for further exploration. The diversity found among these eight subjects suggests that it is early to turn to quantitative research. More needs to be known about the phenomenon in a general or qualitative way before existing measurement instruments are applied with confidence or more instruments are created. For example, because findings in the present study were inconsistent with Cottle's assumptions about the two instruments that were designed by him, further qualitative research combined with the use of the Circles Test and the Lines Test could be fruitful.

The concept of a "healthy" experience of time deserves further attention. Some questions that could be explored deal with "health" as it is related to: (a) spirituality or religiousness, (b) to expectation of existence beyond death, (c) to unusual experiences related to time, (d) to experience with life crisis, and (e) to having

considered and accepted the reality of one's mortality.

The differences reported in attitudes towards time, orientation in time, and in expansiveness of the present subjects' views of personal and universal time suggest a more or less egocentric stance towards time. Is there an egocentric as opposed to an historiocentric, or alocentric stance towards time?

It would be interesting to consider the data in the present study through particular theoretical frameworks in the fields of psychology and philosophy. The differences might reflect developmental levels of the experience of time. Further research using a theory of adult development, such as Dabrowski's Theory of Positive Disintegration, might reveal a multi-level view of time.

Some questions that might be addressed in further research on time are:

Must individuals be aware of time in order to experience it?

To what extent is the experience of time a product of current social trends and expectations?

Does personality structure or philosophical stance of, or values held by the subject, affect his or her experience of time?

Do differences in educational level, cultural background (e.g., between regions within Canada, urban versus rural), age, or gender affect the experience of time?

Does fear of annihilation by nuclear holocaust affect the perceptions or meaning of time, or orientation in time?

How is the experience of time affected by conditions such as illness (temporary and terminal), being in physical pain, or being pregnant?

Is the outcome of therapy more successful if the temporal orientation of the therapy is matched with the client's temporal orientation?

Concluding Thoughts

The present study has drawn to a finish. It has been in process, at least within the researcher's consciousness, for several years. Bringing this piece of work into a form in space that will endure in time, that is, a written form, has sensitized the researcher's awareness to many of the experiences of time described by the subjects in the study. Time has sped by as deadlines approached. Time has dragged interminably when ideas and words would not come. The past returned strongly to the researcher as she pored over transcripts of interviews with subjects and absorbed the experience

described at an earlier time. Planning, setting deadlines, renewing library books for yet another six-week period, postponing other matters, making promises to friends and family, offering rewards for one's own diligence, contemplating the hope of worthwhile results, and anticipating the satisfaction of completion were all harbingers of the future.

There were times when the abundance of information offered up by the subjects and the meaning that was to be distilled from it overwhelmed the researcher and plunged her into a state of confusion. Through this there were three quotes from the literature that helped sustain sanity. The first, from Zukav (1979), merely expressed what was happening: "Whenever we bump into the limits of our self-imposed cognitive reality, the result is always paradox" (p. 158). As is usually so of encounters with paradox, the outcome was new glimpses of the truth. Secondly, there were times when new truths were slow in coming and it was necessary to give in to the blissful submission of Charles Lamb who said, "Nothing puzzles me more than time and space; and yet nothing troubles me less, as I never think about them" (Priestly, 1964, p. 62). And finally, the researcher took courage knowing that A. N. Whitehead (1964) had said: "It is impossible to meditate on time and the mystery of the creative passage of nature without an overwhelming emotion at the limitations of human intelligence" (p. 73). There is comfort in knowing one shares an experience with such a creative, time-haunted being.

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APPENDIX A

QUESTIONNAIRE ABOUT TIME

PERSONAL DATA

Subject number:

Sex:

Age:

Marital status:

Ages of children:

Occupation:

Education (highest level):

Religion:

Place of birth:

1. VERBAL STIMULI

Please describe freely, in relation to each word listed below, your emotional association and experiences. Use as much space as you feel you need on the separate sheets provided.

Death

Past

Present

Future

Immortality

Time

2. TAT PICTURE

Please make up a story to go along with the following picture:

(Picture number one from the First Series of the Thematic Apperception Test TAT, 1971, depicting a boy contemplating a violin which rests on a table in front of him, follows)

3. CIRCLES TEST

Think of the past, present and the future in the shape of circles, and draw them on this page:

4. SYMBOL OR METAPHOR

What symbol or metaphor is representative of time for you?

5. LINES TEST

Think of the line printed below as being time. Put marks on it showing:

-your own birth and death

-the boundaries of the present

Between now and our interview please think about any experiences you have had in your lifetime involving an alteration in your perception of time e.g., a change in the rate of passage of time, a deja vu experience, a precognitive experience. Thank you for your "time".

APPENDIX B

INTERVIEW QUESTIONS

1. (Go back and fill in any omissions on the Questionnaire on Time.)

2. Estimate the span of time covered by the story you have written in response to question 2.

3. Draw a stick figure representing yourself somewhere on the circles you have drawn in response to question 3.

4. What emotional response do you have when you think of: past, present, and future?

5. Consider an important decision you have made. When you were making your choice, what was more important to you?
   a. That your choice be consistent with past learnings and experiences?
   b. That your choice be relevant to your present circumstances, that is, what seemed right at the time?
   c. The implications of your choice on your future?

6. Complete the following sentences:
   a. The past is good for _____.
   b. The present is good for _____.
   c. The future is good for _____.

7. (If the subject hasn't spoken in a personal way about death): Which of the following statements best describes your attitude about death?
   a. I am afraid of death.
   b. It troubles me, but I wouldn't say I fear it.
   c. I haven't given it much thought.
   d. I've decided not to think or worry about death.
   e. I'm working toward accepting it.
   f. I've thought about it a great deal, and have come to accept it.
   g. I'm looking forward to it.
   h. Other:_____.

8. (If it hasn't been indicated in question 5 on the questionnaire): At what age do you think you will die?

9. What do you believe follows death?

10. Do you consider yourself a religious or spiritual person?

11. Do you meditate, pray or otherwise communicate with God?

12. Does time go by at a regular pace for you? If not, under what circumstances does time seem to move more quickly or slowly for you?

13. Have you ever had an experience of "knowing" ahead of time about some event which later takes place, that is, a precognitive experience?

14. Have you ever found yourself in a situation which, although new, felt like you had experienced it before, that is, a deja vu experience?

15. Have you experienced any other alterations in, or unusual perceptions of, time?

16. Have you ever felt that your time was different from that of others around you--your family, co-workers, society in general? How do you explain this?

17. What would you consider to be your ethnic origin?

18. Does time ever end? Does time have a beginning?

19. What would be your definition of time?